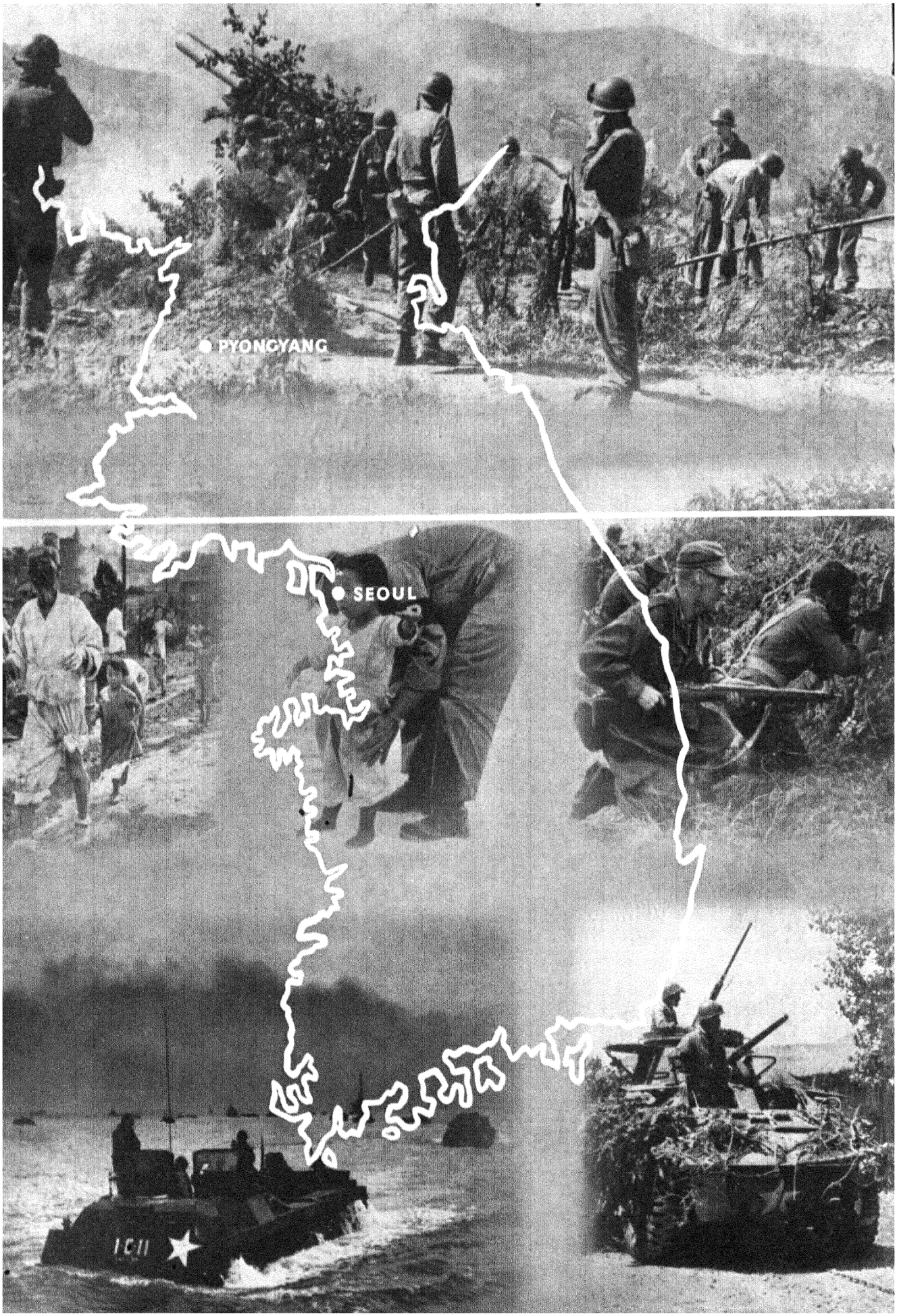
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BOOK OF THE YEAR
1951


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BRITANNICA BOOK OF THE YEAR

1951



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PREFACE

FOR this, the 1951 edition of the *Britannica Book of the Year*, the opportunity was taken to emphasize by an increase in length the importance of a few articles dealing with topics especially prominent in 1950. One of the selected articles was COMMUNIST MOVEMENT. For, as the contributor has said in his introductory sentence to it, " it was generally recognized by 1950 that the Communist movement in the world was a much more complicated affair than had often been realized." It was hoped, therefore, that the article would give to all a better understanding of the subject's facets. A corollary to this decision was a fuller treatment for the article CHINA, a country which by Oct. 1950 had completed its first full year of control by the People's Republic. A third choice fell most deservedly but less dramatically upon the British domestic topic of LIBRARIES to mark the centenary of the passing of the Public Libraries act in 1850.

The year also demanded a number of new titles. One of these, HOLY YEAR, though by its nature transitory, offered the opportunity for some good descriptive writing; another, unwelcome, was KOREAN WAR. The barometers of opinion and emotion were seldom steady about this war but at the start the mood of the Western world was captured by the cartoon reproduced from *Punch* on page 649.

Other new articles to be introduced included CIVIL DEFENCE, EUROPEAN COAL AND STEEL POOL (Schuman Plan), EASTERN EUROPEAN ECONOMIC PLANNING and HEAVY ENGINEERING and LIGHT ENGINEERING. It had been felt for some time that the articles on individual industries, which were retained, had failed by themselves to give the general reader a sufficiently clear picture of industrial achievements and developments. The articles on heavy and light engineering were planned to overcome this defect.

An innovation was the assigning of separate articles to all British and French colonies, the article FRENCH UNION now becoming a general review like its counterpart COMMONWEALTH OF NATIONS. Marching with the times COMMONWEALTH OF NATIONS was itself a change of title taking the place of the former BRITISH EMPIRE. Other changes of title were YOUTH EMPLOYMENT for JUVENILE EMPLOYMENT; JEWRY, WORLD for JUDAISM. Grave and gay, as much as possible of the happenings of 1950 were recorded. KASHMIR was conspicuous; Brumas was remembered.

JOHN ARMITAGE
London Editor.

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J.W.Fr. **Bowls**
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J.W.Mw. **Reparations; etc.**
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K.E.R. **Gold Coast; Nigeria; etc.**
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K.G.B. **British Borneo; Kenya; etc.**
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K.Sm. **Eastern European Economic Planning; Poland; etc.**
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L.A.Wl. **Telephone** (*in part*)
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L.D.L. **Painting** (*in part*)
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L.E.F. **Insurance** (*in part*)
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L.V.D. **Field Sports**
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L.Wo. **Trade Unions** (*in part*)
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Ma.Br. **Turkey; etc.**
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N.McW. **Athletics** (*in part*); **Empire Games**
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O.Tw. **Arabia; Arab League; etc.**
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P.M.S. **Botanical Gardens** (*in part*); **Horticulture**
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P.O'S. **Johnstone, William Raphael**
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P.Ss. **Insurance** (*in part*)
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P.Ta. **Employment** (*in part*); **Strikes and Lockouts** (*in part*)
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P.W.H. **Photography** (*in part*)
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Q.W. **International Law**
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R.A.Bn. **Advertising** (*in part*)
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Ra.L. **Endocrinology** (*in part*)
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R.Ba. **Consumer Credit** (*in part*)
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R.C.-W. **Philosophy**
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R.D.B. **Rowing**
RICHARD DESBOROUGH BURNELL, B.A. Rowing Correspondent, *The Times*, London. Editor, *British Rowing Almanack.*

R.E.Bs. **Literary Prizes** (*in part*)
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R.E.E.H. **Baptist Church**
REUBEN E. E. HARKNESS, M.A., B.D., Ph.D. President, The American Baptist Historical Society. Professor of Christianity, Crozer Seminary, Chester, Pennsylvania.

R.F.Am. **British Council**
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R.F.G.C. **Congregational Churches**
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R.G.D.A. **Prices** (*in part*)
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R.G.L. **Inventors, Awards to**
RHYS GERRAN LLOYD, M.A., B.Sc. Barrister-at-Law. Secretary of the Royal Commission on Awards to Inventors. Editor of *Kerly on Trade Marks* (7th edition).

R.H.B. **Epidemics**
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R.H.Frg. **Arthritis**
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R.H.Ls. **Museums** (*in part*)
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R.Ho. **Billiards and Snooker** (*in part*)
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R.H.Ri. **Grain Crops; Wheat**
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R.H.Sl. **Jet Propulsion and Gas Turbines** (*in part*)
REGINALD HERBERT SCHLOTEL, F.R.Ae.S. Deputy Director of Engine Research and Development, Ministry of Supply, London.

Ri.A.B. **Ex-Servicemen's Organizations** (*in part*)
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R.Is. **Anaemia**
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R.J.My. **Clothing Industry** (*in part*); **Fashion and Dress** (*in part*)
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R.Js. **Moscow** (in part)
RICHARD JONES. Former Editor of *British Ally* (Britansky Soyuznik), Moscow. Former Assistant News Editor, *Daily Telegraph* and Night News Editor, *Daily Mail*, London.

R.L.Fo. **Accidents** (*in part*)
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R.L.Hs. **Hockey**
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R.L.S.-R. **Radio, Scientific Developments in; etc.**
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R.M.Ge. **Soil Conservation** (*in part*)
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R.N.Ba. **Royal Navy**
ROBERT NESHAM BAX. Admiral, Royal Navy (retired).

Ro.B. **Zoological Gardens** (*in part*)
ROBERT BEAN. Director of the Chicago Zoological Park, Brookfield, Illinois.

R.R.W.F. **Fruit; Market Gardening; etc.**
ROGER ROLAND WESTWELL FOLLEY, B.Sc., B.Com. Departmental Demonstrator, Institute for Research in Agricultural Economics, University of Oxford.

R.S.T. **Munitions of War** (*in part*)
ROBERT S. THOMAS, A.M. Military Historian, Historical Division, Special Staff, War Department, Washington. Author of *The Story of the 30th Division, A.E.F.*

R.Sy. **Methodist Church** (*in part*)
RALPH STOODY. Executive Director, The Commission on Public Information of The Methodist Church, U.S.A.

R.Tu. **Political Parties, U.S.**
RAY TUCKER, B.A. Writer of Syndicated Column, " The National Whirligig ". Author of *The Mirrors of 1932*; etc.

R.U.C. **Skiing**
MISS R. U. CROXTON. Secretary, Ski Club of Great Britain.

R.V.B.B. **Navies of the World**
RAYMOND VICTOR BERNARD BLACKMAN, A.M.I.N.A., A.I.Mar.E. Editor, *Janes Fighting Ships*; Author of *Modern World Book of Ships.*

R.W.B. **New Zealand Literature**
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R.W.Cr. **Broadcasting** (*in part*)
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R.W.J.K. **Young Men's Christian Association** (*in part*)
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S.E.Ws. **Albania**
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S.Hr. **European Recovery Programme; etc.**
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S.McC.L. **International Labour Organization**
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S.Nr. **Formosa; Pacific Islands, U.S.; etc.**
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S.P.J. **Air Forces of the World** (*in part*); **etc.**
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S.Sd. **Export-Import Bank of Washington**
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S.S.H. **Stocks and Shares** (*in part*)
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T.Bar. **Wealth and Income, Distribution of** (*in part*)
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T.C. **Church of Scotland**
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T.H.MacD. **Roads** (*in part*)
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T.J.B. **Venereal Diseases** (*in part*)
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T.Rse. **Canasta; Contract Bridge** (*in par*
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W.A.Ft. **Bridges** (*in part*)
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W.H.Tr. **Motor-Boat Racing**
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W.J.Bp. **Alder, Kurt; Diels, Otto; etc.**
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W.J.Bt. **Furs** (*in part*)
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W.J.C. **Railways** (*in part*)
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W.J.Cl. **Co-operative Movement** (*in part*)
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W.Mr. **Organization of American States**
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W.Sm. **Korea** (*in part*)
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W.T.Ws. **Judiciary, British; Law and Legislation** (*in part*); etc.
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W.V.M. **Hutchins, Robert Maynard**
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W.V.Wt. **Prices** (*in part*)
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X.
ANONYMOUS.

DIARY OF EVENTS, 1950

JANUARY

1: **Great Britain.** Six peers were created in the New Year Honours.

Austria. Major General T. J. W. Winterton succeeded Lieut. General Sir Alexander Galloway as British high commissioner.

India. Cooch Behar state was merged with West Bengal.

2: **Persia.** The shah returned from his visit to the United States.

3: **Egypt.** General elections were held. The final results gave the Wafd (nationalist party) 225 seats.

4: **Great Britain.** The chancellor of the exchequer, Sir Stafford Cripps, stated that in the fourth quarter of 1949 the gold and dollar deficit had fallen to $31 million.

China. The Communist government was recognized by Pakistan.

India-Afghanistan. A five-year treaty of peace and friendship was signed in New Delhi.

5: **Greece.** The government led by A. Diomidis resigned. Field Marshal A. Papagos resigned as commander in chief.

Indo-China. Bao Dai dissolved the Vietnam government and requested Nguyen Phan Long to form a new one.

6: **Great Britain.** Notes were sent to the governments of Bulgaria, Hungary and Rumania concerning the alleged violation of human rights. Similar notes were sent by Canada and the U.S.

China. The Communist government was recognized by Great Britain, Ceylon and Norway.

Greece. John Theotokis formed a caretaker government. Field Marshal Papagos withdrew his resignation.

India-Pakistan. Jawaharlal Nehru stated it had been proposed that the two governments should sign a declaration renouncing war as a means of settling their disputes.

North Atlantic Treaty. The North Atlantic council met in Washington.

United States. In his annual economic report to congress, President Truman stated that the renewed confidence in the U.S. economy was "justified by the facts."

9: **Commonwealth.** A conference of the foreign ministers of the Commonwealth countries opened in Colombo.

China. The Communist government was recognized by Denmark and Israel.

Council of Foreign Ministers. The deputies of the foreign ministers resumed meetings in London on the Austrian peace treaty.

United States. In his budget message, President Truman estimated expenditure at $42,400 million.

0: **Great Britain.** It was announced that parliament would be dissolved and that a general election would be held on Feb. 23.

Canada. A three-day conference of federal and provincial prime ministers to discuss a method of making amendments to the British North America act opened in Ottawa.

Indonesia. It was learned that a revolt was taking place in west Java under Captain "Turco" Westerling, a former Dutch officer.

United Nations. The Soviet delegate, Y. Malik, proposed that the Chinese Nationalists should be expelled from the Security council. After it was decided to defer consideration, Malik walked out of the council.

11: **Italy.** The government resigned to enable the Saragat Socialists to enter a reconstructed government.

Persia. The government resigned. Mohammed Saed, the outgoing prime minister was asked to form a goverment.

12: **Egypt.** An all-Wafd government was formed with Nahas Pasha as prime minister.

Gold Coast. A state of emergency was proclaimed following the opening of a civil disobedience campaign.

Soviet Union. A decree was issued restoring capital punishment for offences of treason, espionage and sabotage.

13: **China.** The Communist government was recognized by Finland.

Poland. It was announced that the French Institute in Warsaw had been closed.

United Nations. By 6 votes to 3 in the Security council, the Soviet motion to expel the Chinese Nationalists was defeated. Y. Malik again left the council.

14: **Commonwealth.** The Colombo conference ended. Among the subjects discussed were the world situation, China, Japanese peace treaty, southeast Asia and Europe. Recommendations for economic development (the "Spender plan") in southeast Asia were submitted to the Commonwealth governments.

Bolivia. The government declared a state of siege following the discovery of "subversive activities."

China. The Communist government was recognized by Sweden.

Italy. Alcide De Gasperi was asked to form a new government.

Persia. Mohammed Saed formed a new government.

15: **Cyprus.** An unofficial plebiscite on union with Greece resulted in a 96% vote in favour.

16: **Finland.** Presidential elections were held. The final results showed the Social Democrats and Agrarians as the largest parties.

International Labour Organization. A regional conference opened in Ceylon.

17: **Pakistan.** Liaquat Ali Khan agreed to the Indian proposal for a "no-war" declaration only after the settlement of certain outstanding differences.

United Nations. The interim committee ("little assembly") met for the first time in 1950 and elected João Carlos Muniz of Brazil as president.

18: **Scandinavia.** A joint committee on a customs union between Denmark, Iceland, Norway and Sweden issued a report, recommending a transition period of 10 years.

19: **Bulgaria.** The government requested the immediate recall of D. R. Heath, the U.S. minister in Sofia.

Israel. *De jure* recognition was granted by Italy.

United Nations. Soviet delegates withdrew from the Atomic Energy commission as a protest at the presence of a Chinese Nationalist delegate.

United States. By 193 votes to 191 the House of Representatives defeated a bill for continued U.S. aid to Korea.

20: **Bolivia.** The government resigned.

China. Chou En-lai, prime minister and foreign minister, arrived in Moscow.

United States. In its reply to the Bulgarian note, the United States government refuted the allegations against D. R. Heath and threatened to break diplomatic relations.

21: **Ireland-United States.** A treaty of friendship, commerce and navigation was signed in Dublin.

22: **United States.** Alger Hiss, a former State Department official, was found guilty of perjury for denying under oath that 12 years before he had handed government documents to a Soviet spy.

23: **Bulgaria.** V. Kolarov, prime minister, died.

Israel. The Knesset adopted a resolution proclaiming Jerusalem as the capital of Israel.

24: **India.** The Constituent Assembly unanimously elected Rajendra Prasad as the first president of India.

Indonesia. The prime minister of West Java, Anwar Tjokroaminoto, was arrested. The federal government was recognized by the U.S.S.R.

25: **Council of Foreign Ministers.** The four deputies received Karl Gruber, Austrian foreign minister.

Western Union. The finance ministers of the five countries met in Paris.

26: **France.** By 540 votes to 2 the National Assembly renewed the 3,000-franc cost-of-living bonus.

India. The republic of India was formally proclaimed. The last governor general, Chakravarti Rajagopalachari, handed over to the first president, Rajendra Prasad.

O.E.E.C. The consultative group began a two-day meeting in Paris.

27: **Burma.** The prime minister, Thakin Nu, arrived in Colombo.

Indonesia. The West Java government resigned.

Italy. A new cabinet was formed consisting of 11 Christian Democrats, 3 Social Democrats and 2 Republicans.

North Atlantic Treaty. Eight signatory nations of the treaty—Great Britain, Belgium, Denmark, France, Italy, Luxembourg, the Netherlands and Norway—signed bilateral arms aid agreements with the United States.

United Nations. The Trusteeship council voted in favour of an Italian trusteeship agreement for Somaliland.

28: **Bolivia.** A new government was formed. All but one of the ministers were members of the Republican Socialist Union party.

Egypt. King Farouk received Ernest Bevin who had arrived in Cairo on his return from the Colombo conference.

France. By 396 votes to 193 the National Assembly ratified the treaties with Cambodia, Laos and Vietnam.

30: **Indonesia.** The head of the state of West Java, Wiranata Kusumah, laid down his mandate. The parliament handed over all powers to the federal government.

O.E.E.C. An agreement was signed between representatives of Great Britain, Denmark, Norway and Sweden accepting recommendations for closer economic co-operation.

South Africa. A motion of no-confidence in Dr. Malan's government was defeated by 78 votes to 71.

31: **Australia.** P. C. Spender, minister for external affairs, said any attempt by Indonesia to establish control over Australian New Guinea would be treated as an act of hostility.

Indo-China. The U.S.S.R. recognized the administration of Ho Chi Minh. The French government protested that this step violated international law.

O.E.E.C. The council appointed D. U. Stikker, Netherlands foreign minister, to the new post of political conciliator. The two vice presidents, Karl Gruber, Austria, and Seán MacBride, Ireland, were invited to join the consultative group.

United States. President Truman announced that he had directed the Atomic Energy commission to continue work on all forms of atomic weapons, including the hydrogen bomb.

FEBRUARY

1: **Bulgaria.** The National Assembly elected Vlko Chervenkov as prime minister.

Indo-China. The Soviet ambassador returned the French note to the French foreign office.

Iraq. The prime minister, Ali Jawdat al Ayyubi, resigned.

Soviet Union. The government sent notes to the governments of Great Britain, Communist China and the United States proposing the trial of Emperor Hirohito as a war criminal.

2: **France.** The Council of the Republic ratified the treaties with Cambodia, Laos and Vietnam by 294 votes to 20.

Indo-China. The Vietminh government was recognized by Czechoslovakia.

Indonesia. Ahmed Sukarno returned to Jakarta after visiting India, Pakistan and Burma.

Pakistan. The government withdrew its trade ban with South Africa.

3: **Great Britain.** The 38th parliament of the United Kingdom was dissolved.

Ernest Bevin returned to London from Colombo.

Chile. Following a wave of strikes the government resigned.

Indo-China. The Vietminh republic was recognized by Hungary, Poland and Rumania.

Indonesia. The government was recognized by Poland.

Tanganyika. Rioting broke out in the native quarter of Dar-es-Salaam.

United States. The government rejected the Soviet note proposing the trial of Hirohito.

4: **Chile.** President G. González Videla appointed an all-party cabinet.

France. The Socialist members of the Cabinet resigned.

Italy. The Chamber of Deputies passed the Somaliland bill by 287 votes to 153. The bill provided for preliminary expenditure in Somaliland for trusteeship purposes.

Empire Games. The fourth Empire Games were opened in Eden Park, Auckland, by Sir Bernard Freyberg, governor general of New Zealand.

5: **Egypt.** The government decided to end martial law.

Greece. The last British troops left Greece.

Iraq. Tawfiq as Suwaidi formed a coalition government.

6: **South Africa.** Preliminary discussions began in Capetown between representatives of India, Pakistan and South Africa.

7: **France.** Non-Socialists were appointed to fill the vacancies in the government. By 225 votes to 185 (with 200 abstentions) the National Assembly supported the Bidault government.

Indo-China. The British and United States governments granted recognition to the governments of Vietnam, Cambodia and Laos.

United Nations. The Soviet, Czechoslovak and Polish delegates walked out of the Economic and Social council after failing to unseat the Chinese Nationalist delegation.

8: **Australia.** P. G. Menzies, prime minister, announced the ending of petrol rationing.

Belgium. The House of Representatives voted by 117 votes to 92 in favour of a referendum on the return of King Leopold.

Indo-China. The governments of Australia and Belgium granted recognition to Cambodia, Laos and Vietnam. The Vietminh government was recognized by Bulgaria.

9: **India.** Troops were called out in Calcutta during an outbreak of communal rioting.

United States. The House of Representatives passed by 240 votes to 134, a bill authorizing economic aid to Korea and to Formosa.

10: **Great Britain-Israel.** A financial agreement was concluded in London.

United States. The Export-Import bank announced a loan of $100 million to Indonesia.

11: **India.** Twenty people were killed and 100 injured when police opened fire to quell a riot in Salem prison, Madras.

13: **Great Britain.** Nominations ended for the general election. 1,868 candidates had been nominated for 625 seats, including two unopposed returns.

Scandinavia. A conference was held at Halmsted, Sweden, between the prime ministers of Denmark, Norway and Sweden.

South Africa. Rioting broke out in Newclare, near Johannesburg.

United States. A conference of the heads of U.S. diplomatic missions in 14 Asian countries was held in Bangkok.

14: **Great Britain.** In an election speech at Edinburgh, Winston Churchill suggested direct talks with the Soviet Union on the control of atomic energy.

Italy. The Chamber of Deputies passed a motion of confidence in the new De Gasperi government. Fighting took place in the chamber during the prime minister's speech.

Liberia. A state of emergency was proclaimed following a riot by rubber workers on strike.

Soviet Union-China. A 30-yr. treaty of friendship, alliance and mutual assistance was signed in Moscow by A. Vyshinsky and Chou En-lai. Agreements were also signed dealing with the Manchurian railway, Port Arthur and Dairen, and with the establishing of long-term credits by the U.S.S.R. to China.

United States-Yemen. The State Department announced the restoration of full diplomatic relations which had been broken off in 1948.

15: **Finland.** Juho Paasikivi was re-elected president.

Indonesia. The first session of the Indonesian parliament opened in Jakarta.

16: **Burma.** The parliament unanimously decided to postpone the general election for a further 12 months.

Indonesia. The government was recognized by Rumania.

International Court of Justice. Hearings began on the question whether the general assembly could over-rule the Security council on the admission of new members.

West Indies. Princess Alice was installed as first chancellor of the University College of the West Indies, in Jamaica.

17: **China.** Mao Tse-tung and Chou En-lai left Moscow for Peking.

Nepal. Maharaja Mohan Shumshere Jung Bahadur Rana, prime minister, arrived in New Delhi on an eight-day good will visit to India.

18: **Belgium.** The cabinet endorsed a 10-yr. plan for the Belgian Congo.

20: **Somaliland.** The first Italian troops disembarked at Mogadishu.

21: **Eritrea.** 22 people were killed in rioting between Copts and Moslems.

Hungary. At a trial in Budapest, Edgar Sanders (Great Britain) and Robert Voegler (U.S.) were found guilty of espionage and sentenced to long terms of imprisonment.

Indo-China. The Yugoslav government recognized the Ho Chi Minh administration.

World Health Organization. Rumania withdrew from the W.H.O.

22: **Hungary.** The British and U.S. governments were requested to reduce the size of their legations in Budapest.

United States. The government suspended diplomatic relations with Bulgaria (later Poland agreed to represent Bulgarian interests in the U.S., and Switzerland, U.S. interests in Bulgaria).

23: **Great Britain.** A general election was held. The Labour party was returned to office with a majority over all other parties of 6. Over 84% of the electorate voted.

China. Communist troops landed on Namoa island.

Eritrea. A total curfew was imposed in Asmara following continued clashes.

Italy. The trial of Marshal Rudolfo Graziani on charges of war crimes opened before a military court in Rome.

24: **Western Germany.** It was announced that Field Marshal Manstein's sentence had been reduced from 18 to 12 years.

25: **Indonesia.** The leader of the West Java revolt, Captain Westerling, was arrested in Singapore on charges of entering the colony illegally.

Soviet Union. A Ministry of the Navy of the U.S.S.R. was created. Admiral I. S. Yumashev was appointed minister.

27: **United States-Canada.** A treaty on the preservation and usage of the Niagara falls was signed in Washington.

28: **Great Britain.** The Labour government was reformed. Emanuel Shinwell returned to the cabinet as minister of defence, and Hugh Gaitskell was appointed minister of state for economic affairs.

Chile. The government was defeated in the congress.

Indo-China. The governments of Cambodia, Laos and Vietnam were recognized by Thailand.

International Court of Justice. Hearings began in the case concerning the interpretations of the peace treaties with Bulgaria, Hungary and Rumania.

MARCH

1: **Great Britain.** The new House of Commons met for the first time and re-elected Colonel Douglas Clifton Brown as speaker.

Dr. K. E. J. Fuchs, a naturalized British subject working on atomic research, was sentenced to 14 yr. imprisonment for giving information on atomic energy to the U.S.S.R.

Council of Foreign Ministers. The deputies met to discuss the Austrian treaty.

Iceland. The government led by Olafur Thors resigned.

Persia. The shah of Persia arrived in Karachi on a state visit to Pakistan.

Soviet Union. The rouble was revalued on a gold basis. New price reductions in many goods came into effect.

United States. The U.S. Export-Import bank authorized an additional $20 million loan to Yugoslavia.

2: **Western Germany.** The high commission signed a law prohibiting German activity in the field of atomic energy.

3: **France-Saar.** A series of agreements was signed in Paris by R. Schuman, French foreign minister, and Johannes Hoffmann, prime minister of the Saar.

International Court of Justice. The court ruled that the general assembly was not competent to override the Security council on the question of the admission of new members.

Rumania. The British Information office in Bucharest was closed at the request of the Rumanian government.

Spain. The government granted recognition to Vietnam, Cambodia and Laos.

United States. The House of Representatives passed a bill by 186 votes to 146 granting statehood to Alaska; the bill was then passed to the Senate for approval.

4: Elections were held in South Australia. The Liberal-Country league government was returned to office.

China. Mao Tse-tung and Chou En-lai returned from Moscow.

United States. The government rejected a Hungarian request to reduce the size of its legation in Budapest as "improper and irrelevant."

Western Germany. Konrad Adenauer, federal chancellor, strongly criticized the Saar agreements.

5: **Greece.** A general election was held. The Populist party emerged as the largest with 62 seats in a chamber of 250.

6: **Great Britain.** The King opened parliament. His speech announced a limited programme of legislation.

India. Jawaharlal Nehru arrived in Calcutta to study the communal situation.

United Nations. The Economic and Social council granted "category A" consultative status to the International Confederation of Free Trade Unions.

World Health Organization. Albania withdrew from the W.H.O.

7: **Great Britain-France.** President Vincent Auriol and Mme. Auriol of France arrived in Britain on a state visit.

Burma. A joint note from Great Britain, Australia, Ceylon, India and Pakistan announced that the Commonwealth would make a loan to Burma of £6 million.

France-Italy. Agreements were signed to further a customs union.

Germany. Sir Brian Robertson, British high commissioner, re-affirmed the British intention of remaining in Berlin.

United States. The House of Representatives passed a bill granting statehood to Hawaii; the bill was subsequently passed to the Senate for approval.

8: **Great Britain.** The secretary of state for commonwealth relations, P. Gordon-Walker, announced that the government had decided to withhold recognition of Seretse Khama as chief of the Bamangwato tribe in Bechuanaland for at least five years.

China. General Chen Cheng was elected Nationalist prime minister in succession to Marshal Yen Hsi-shan.

Nigeria. The secretary of the Zikist movement, Mokwugwo Okoye, was sentenced to 33 month's imprisonment on charges of possessing seditious publications.

Singapore. Captain Westerling pleaded guilty to entering the colony illegally and was sentenced to one month's imprisonment.

9: **Great Britain.** A division in the new House of Commons on steel nationalization gave the government a majority of 14 (310 votes to 296).

Conservatives retained the Moss Side seat of Manchester. Polling had been delayed because of the death of a candidate.

Indonesia. Central Java, East Java, the town of Padang in Sumatra, and the islands of Madura and Sebang were merged with the republic.

10: **Scandinavia.** A two-day conference of the foreign ministers of Sweden, Denmark and Norway opened in Stockholm. A representative of Iceland was present.

11: **Belgium.** A referendum was held on the question of King Leopold's return, 57·68% of the votes being cast in favour.

12: **Indo-China.** The Holy See granted recognition to Vietnam, Laos and Cambodia.

Indonesia. West Java was merged with the republic.

Soviet Union. Elections were held for the Soviet of the Union and the Soviet of Nationalities. 99·98% of the electorate voted; the Communist and non-party lists received for the Soviet of the Union 99·73% and for the Soviet of Nationalities 99·78% of the respective votes.

13: **Great Britain.** A debate on housing in the House of Commons resulted in a government majority of 25.

Belgium. The prime minister, G. Eyskens, left Brussels for discussions with King Leopold.

International Monetary Fund and Bank. Poland withdrew from membership.

Syria-Lebanon. The Syrian government announced the rupture of the customs union between the two countries.

14: **Czechoslovakia.** Vladimir Clementis was replaced as foreign minister by Vilem Siroky.

Iceland. A coalition government was formed by Steingrimur Steinthórsson.

India. Jawaharlal Nehru made a second visit to Calcutta to study the communal situation.

15: **Persia-India.** A treaty of friendship was signed in Tehran.

16: **Great Britain.** The appointments were announced of General Sir Brian Robertson as commander in chief Middle East Forces, and Sir Ivone Kirkpatrick as high commissioner in Germany.

The government requested the Rumanian government to close its information office in London.

Belgium. King Leopold declared he would accept the decision of parliament and would abdicate if parliament considered he should not resume his duties.

17: **Finland.** The president of the parliament, Urho Kekkonen, formed a government.

Persia. The shah left Karachi at the end of his good-will visit to Pakistan.

18: **Belgium.** The government led by G. Eyskens resigned.

Iceland. The Króna was devalued to 16·29 to the U.S. dollar, and its value increased in relation to the pound sterling from 26·22 to 45·60.

19: **Belgium.** G. Eyskens was asked to form a new government.

Burma. Government forces recaptured Toungoo, 180 mi. north of Rangoon.

Persia. The government led by Mohammed Saed resigned.

21: **Great Britain.** The appointment was announced of Sir Gladwyn Jebb as permanent representative at the United Nations in succession to Sir Alexander Cadogan.

Malaya. General Sir Harold Briggs was appointed director of operations.

22: **Belgium.** G. Eyskens failed to form a government and Count Henri Carton de Wiart was asked to try.

Persia. Ali Mansur was asked to form a government.

United States. President Truman nominated Thomas E. Murray to succeed David E. Lilienthal on the Atomic Energy commission.

23: **Belgium.** The ministers of state, last convened in 1914, met to discuss the political situation.

Greece. A new cabinet under Sophocles Venizelos was sworn in.

World Meteorological Organization. The organization formally came into effect.

24: **Belgium.** Count Carton de Wiart gave up his attempt to form a government.

Italy-Turkey. A treaty of friendship was signed in Rome.

25: **Australia.** A general election was held in Western Australia. The Liberal-Country coalition government was returned to office.

Belgium. Albert Devèze agreed to try to form a government.

Indo-China. Three members of Bao Dai's cabinet resigned.

Netherlands-Indonesia. The first union conference opened in Jakarta under the chairmanship of Dr. Hatta.

Afghanistan. The king arrived in Tehran on a state visit to Persia.

Yugoslavia. General elections were held. 93% of the votes cast were in favour of the official People's Front.

27: **Arab League.** The council of the league met in Cairo.

China. The Communist government was recognized by the Netherlands

India. Howrah was placed under martial law following communal disturbances.

29: **Horse Racing.** Mrs. L. Brotherton's Freebooter, ridden by J. Power, won the Grand National by 15 lengths.

29: **Great Britain.** The government was defeated in the House of Commons by 283 votes to 257 after a debate on fuel and petrol policy.

Arab League. A Jordan representative and representatives from the Gaza government attended the council meeting.

China-Soviet Union. An agreement was signed giving the U.S.S.R. half of Sinkiang oil and non-ferrous metal output for 30 years.

North Atlantic Treaty. The North Atlantic Defence, Financial and Economic committee met in London.

United States. The House of Representatives voted, by 99 votes to 66, to withhold E.C.A. funds to Great Britain until the British policy on Ireland was changed.

30: **Great Britain.** Clement Attlee announced that the government's defeat would not be regarded as a vote of no confidence and that the government would not resign.

Great Britain-Israel. A financial agreement was signed in London.

France. Léon Blum, three times prime minister of France, died.

International Court of Justice. By 11 votes to 3 the court decided that disputes existed under the peace treaties with Bulgaria, Hungary and Rumania.

Kenya. The town of Nairobi was raised to the status of a city. The King was represented by the Duke of Gloucester.

31: **Great Britain.** The financial year ended with a budget surplus of £549 million.

Council of Europe. The council of ministers approved the text of invitations to Western Germany and the Saar and allocated 18 seats in the assembly to Germany and three to the Saar.

India. Total prohibition was introduced in Bombay.

Kenya. The Duke of Gloucester was made the first freeman of Nairobi.

United States. The Foreign Aid bill was passed by the House of Representatives by 287 votes to 86, after the decision concerning the partition of Ireland (March 29) had been rescinded.

APRIL

1: **Arab League.** The council agreed to expel any member concluding a separate peace with Israel.

India. The central government took over control of the armed forces, posts and telegraphs, customs and income tax from the states.

North Atlantic Treaty. The defence ministers of the 12 treaty powers met at The Hague.

Somaliland. The administration of the former Italian colony was transferred from the British to the Italian authorities as trustees.

Rowing. Cambridge won the university boat race by 3½ lengths in 20 min. 15 sec.

2: **Burma.** On the advice of the official astrologers the government resigned at 9.15 a.m. and resumed office again five minutes later.

Greece. P. Kanellopoulos resigned from the government to allow it to be broadened.

India-Pakistan. Liaquat Ali Khan, prime minister of Pakistan, arrived in New Delhi for talks with Jawaharlal Nehru.

Norway. The prime minister announced increases in the prices of many foodstuffs and other commodities.

3: **Belgium.** Albert Devèze, the Liberal leader who was trying to form a government, saw King Leopold at Pregny.

E.R.P. The half-way mark of the European Recovery programme was celebrated. Since April 1948, the total U.S. aid to Europe under the programme was $8,686 million.

Norway. The rationing of margarine, butter and cooking fats ended.

Persia. A new cabinet was appointed with Ali Mansur as prime minister.

Trinidad. A new constitution for the colony was published.

United Nations. The Soviet delegate left the Economic and Social commission in protest at the presence of a Chinese Nationalist delegate.

4: **Great Britain.** Sir Stafford Cripps said that in the first quarter of 1950 the gold and dollar reserves had risen by $296 million.

Afghanistan-India. A treaty of trade and commerce was signed at Kabul.

Belgium. Albert Devèze gave up his attempt to form a government.

O.E.E.C. D. U. Stikker (Netherlands) was elected chairman of the council. The consultative group was abolished. Sir Edmund Hall-Patch (Great Britain) remained chairman of the executive committee.

Saar. The parliament ratified the five agreements with France by 47 votes to 1.

United Nations. The Trusteeship council adopted a statute for Jerusalem by nine votes to none.

5: **Great Britain.** Maurice Webb, minister of food, announced increases in price of butter and bacon.

Sir Frank Soskice, solicitor general, was elected in the first by-election of the new parliament in the Neepsend division of Sheffield.

Belgium. Paul van Zeeland agreed to try to form a government.

Pakistan. Sir Frederick Bourne, governor of East Bengal, retired and was succeeded by Malik Firoz Khan Noon.

Soviet Union. A Ministry of Cotton Growing of the U.S.S.R. was created.

6: **India.** President Prasad inaugurated the programme of total prohibition in Bombay state.

Indonesia. The federal government arrested Sultan Hamid II of West Borneo.

United States. President Truman announced the appointment of John Foster Dulles, Republican, as consultant to the secretary of state.

7: **New Zealand.** F. W. Doidge, minister for external affairs, announced that the New Zealand legation in Moscow would be closed.

8: **American States.** The council of the Organization of American States voted unanimously to warn Cuba, Guatemala and the Dominican Republic that sanctions would be applied if there was further unrest in the Caribbean area.

India-Pakistan. The two prime ministers reached agreement on minority rights, with special reference to East Bengal, West Bengal and Assam.

9: **Arab League.** The political committee unanimously approved a collective security pact.

Bolivia. The government devalued the peso by 43%.

10: **Iraq.** The High Court sentenced Ali Khalid, former chief of police, to life imprisonment for trying to overthrow the government by force.

11: **China.** The Sino-Soviet treaty of friendship, alliance and mutual assistance was ratified by the Chinese People's government.

Soviet Union. The government, in a note to the U.S. government, alleged that U.S. aircraft flew over Latvia and opened fire on Soviet fighters on April 8.

12: **Chile.** President Gabriel González Videla arrived in Washington on a state visit.

Jordan. The prime minister, Tawfik Pasha Abulhuda, resigned.

Soviet Union. The government protested to Italy over the failure to deliver reparations.

Soviet Union-Eastern Germany. A trade and payments agreement was signed in Moscow.

United Nations. The Security council appointed Sir Owen Dixon, Australian high court judge, mediator in the Kashmir dispute.

13: **Arab League.** The council of the league adjourned after all member states had signed an agreement for collective defence and economic co-operation.

Jordan. A new cabinet was formed by Said Pasha el Mufti.

South Africa. In a speech to the Union House of Assembly Dr. Malan proposed that the negotiations started with Great Britain over the three protectorates and interrupted by World War II should be resumed.

14: **Greece.** S. Venizelos, the prime minister, resigned. General N. Plastiras was asked to form a new government.

Poland. The government decided to recognize the Mongolian People's republic.

15: **Belgium.** In a broadcast King Leopold announced that after being recalled by parliament he might delegate his powers temporarily to the crown prince.

Greece. A coalition government led by General Plastiras was sworn in.

16: **Great Britain.** It was announced that Stanley Evans, parliamentary secretary to the ministry of food, had resigned.

Trieste. Elections were held in the Yugoslav zone. 86·77% of the electorate voted, of whom 88·36% voted for the People's front.

Western Union. The eighth session of the consultative council was held in Brussels.

17: **Bechuanaland.** Seretse Khama returned to Serowe where he was greeted by tribesmen.

18: **Great Britain.** Sir Stafford Cripps presented his third budget to the House of Commons. The lower rates of income tax were reduced and the price of petrol increased. Total revenue for 1950-51 was estimated at £3,898 million and expenditure at £3,455 million.

International Bank. An agreement for a loan of $18·5 million to India was signed in Washington.

Shipping. The Seafarers' section of the International Transport Workers' federation meeting at Amsterdam decided to boycott all ships sailing under the flag of Panama.

United States. The text of the U.S. reply to the Soviet note of April 11 was published. It accused the Soviet government of shooting down an unarmed plane over the Baltic.

19: **India.** The president accepted the resignations of the minister for industry and supply, S. P. Mookerjee, and the minister for commerce, K. C. Neogy.

Pakistan-India. Trade negotiations were resumed in Karachi.

Soviet Union-China. A trade agreement and an agreement on an exchange of goods were signed in Moscow.

United Nations. The Soviet Union withdrew its support for an international regime for Jerusalem.

20: **Great Britain.** The minister of labour, George Isaacs, denounced a strike at the London docks as Communist inspired. 6,737 men were on strike.

Australia. A motion of censure on the speaker, A. G. Cameron, was defeated in the House of Representatives by 67 votes to 38.

21: **Soviet Union.** The government rejected the U.S. note of April 18 concerning a missing U.S. plane.

World Health Organization. Czechoslovakia withdrew from the W.H.O.

22: **Italy.** Count Carlo Sforza stated that Italy was willing to negotiate directly with Yugoslavia over Trieste.

23: **Great Britain.** The centenary of William Wordsworth, who died at Ambleside on April 23, 1850, was celebrated in the Lake district.

Roman Catholic Church. The first canonization during the Holy Year took place at St. Peter's when Emilias de Rodat was declared a saint.

24: **Norway.** The rationing of chocolate and sweets ended.

25: **Great Britain.** The Labour party retained its seat in the Dumbarton west by-election with a majority of 293.

Czechoslovakia. Alexej Čepička, minister of justice, was appointed minister of defence.

Food and Agriculture Organization. Poland left the organization because, it alleged, the F.A.O. had not given it sufficient help after World War II.

France. It was announced that oil deposits had been found near Pau.

South Pacific. The first conference of representatives of the native peoples of the South Pacific opened in Suva, Fiji.

26: **Great Britain.** The government survived two divisions on its budget proposals with majorities of five in each division.

Council of Foreign Ministers. The deputies held their 252nd meeting in London.

Indonesia. A republic of the South Moluccas was declared in Amboina.

Pakistan-India. Jawaharlal Nehru arrived in Karachi for talks with Liaquat Ali Khan.

27: **Great Britain.** The British government recognized Jordan and granted *de jure* recognition to Israel.

The London Dock Labour board announced that unless the strikers returned by May 1 their services would be terminated. About 14,400 men were on strike.

Australia. R. G. Menzies, prime minister, introduced in the House of Representatives a bill dissolving the Communist party.

Indo-China. The prime minister of Vietnam, N'guyen Phan Long, resigned. Bao Dai asked Tran Van Huu to form a government.

Pakistan-India. Talks in Karachi between Liaquat Ali Khan and Jawaharlal Nehru were ended.

28: **France.** F. Joliot was dismissed from his post of high commissioner for atomic energy.

Singapore. An attempt was made on the life of governor, Sir Franklin Gimson, when a grenade was thrown at him.

Thailand. The marriage of King Phumiphon Adundet and Princess Sirikit Kitiyakara was solemnized in Bangkok.

29: **Australia.** The Labour government in Queensland was returned to office in a general election.

Belgium. The regent dissolved parliament.

Football. Arsenal beat Liverpool by 2 goals to 0 in the Football Association cup final at Wembley.

30: **Italy.** The Free Italian Confederation of Trade Unions, the Italian Federation of Labour and the Italian Confederation of Worker's Trade Unions decided to form one trade union federation.

Panama. The government outlawed the Communist party.

MAY

1: **Great Britain.** After a debate in the House of Commons on the government's road transport policy the government and opposition tied in a division with 278 votes each. The chairman of committees gave a casting vote in favour of the government.

Commonwealth. Representatives of the Commonwealth countries met in London to consider the terms of a peace settlement with Japan.

Indo-China. King Norodom Sihanouk of Cambodia took over the functions of head of the government in view of the serious internal situation.

South Africa. In May day disturbances on the Rand, 18 Africans were killed and 38 wounded.

2: **Great Britain.** The 5*s.* limit on meals in restaurants was removed.

India. Chandernagore, French India, was formally merged with the republic of India.

Italy. At a trial in Rome Marshal Graziani was found guilty of military collaboration with the Germans. He was sentenced to 19 yr. imprisonment, of which 13 yr. 8 mth. were remitted.

3: **Great Britain.** It was announced that a British trawler fishing in the White sea had been arrested by the Russians and taken into Murmansk.

4: **Great Britain.** In a by-election at Brighouse and Spenborough Labour retained its seat with a reduced majority.

Council of Foreign Ministers. The 253rd meeting of the deputies discussing the Austrian treaty was held in London. The deputies adjourned till May 22.

5: **India.** After resignations over the Indo-Pakistan minorities agreement Jawaharlal Nehru formed a new government. C. C. Biswas was appointed minister of state for minorities.

South Africa. A bill to outlaw the Communist party was introduced in the House of Assembly.

United States. The Senate approved a $3,122 million programme of U.S. foreign economic aid for the financial year starting on July 1.

6: **Nicaragua.** President Manuel Román y Reyes died in Philadelphia, U.S.

7: **Great Britain.** In May day demonstrations in London skirmishes took place and 70 persons were arrested.

Haiti. The cabinet resigned over a move to permit the re-election of President Dumarsais Estimé.

India. The Punjab mail train was derailed. More than 70 persons were killed.

8: **Hungary.** A bill to establish local councils on the Soviet model was passed by the National Assembly.

Syria. Khaled el Azam, prime minister, resigned. He was asked to form a new government.

United States. After discussions in Paris with Robert Schuman, Dean Acheson announced that the U.S. would provide economic aid to Indo-China.

World Health Organization. The third world health assembly opened in Geneva. Rajkumari Amrit Kaur of India was elected president.

9: **Great Britain.** The House of Commons approved a loan of £3·75 million to Burma. This was Great Britain's share of a Commonwealth loan of £6 million.

France. Robert Schuman announced a French plan for the joint control of French and German steel and coal under a common authority which other countries would join. (This became known as the "Schuman plan").

Western Germany. The cabinet decided to accept the invitation to join the Council of Europe as an associate member.

10: **Haiti.** President Dumarsais Estimé resigned after a *coup d'état* led by a military *junta*.

Red Cross. The Soviet delegation left the committee of the League of Red Cross Societies in Geneva in protest at the presence of Chinese Nationalists.

11: **Great Britian.** A conference in London between Ernest Bevin, Dean Acheson and Robert Schuman opened with a general review of the world situation.

In the House of Commons, Clement Attlee welcomed the French proposal for integrating French and German heavy industry as a contribution towards the solution of a major European problem.

United Nations. The secretary general, Trygve Lie, arrived in Moscow.

12: **Czechoslovakia.** The government denounced the 1947 cultural agreement with Great Britain and ordered British information offices in Czechoslovakia to close from May 13.

Monaco. The offices of the French Communist party in Monaco were closed.

13: **Great Britain.** The British, French and the U.S. foreign ministers announced that they had reached agreement on the main lines of policy in all parts of the world.

Australia. Elections were held for the Victoria Legislative Assembly. The Liberal and Country party lost 3 seats but remained the largest with 27 seats.

14: **Great Britain.** The foreign ministers of Great Britain, France and the U.S. issued a declaration on Germany.

Norway. The city of Oslo began to celebrate the 900th anniversary of its founding.

Soviet Union. The government sent a note to the government of Persia protesting at the carrying out of surveys near the Soviet Union-Persian frontier by foreigners.

Turkey. In a general election the People's party led by President Ismet Inönü was heavily defeated by the Democrats under Celâl Bayar.

15: **Great Britain.** In retaliation against the Czechoslovak action the British government ordered the closing of the Czechoslovak institute in London and the discontinuance of the information work of the embassy.

Commonwealth Conference. A conference of Commonwealth countries on economic aid to southeast Asia opened in Sydney.

North Atlantic Treaty. The North Atlantic council met for its fourth session in London.

Soviet Union. J. V. Stalin received Trygve Lie, secretary general of the United Nations.

Universal Postal Union. The executive and liaison committee met in Berne. For the first time at an international conference representatives from Communist China were admitted.

16: **Arab League.** The political committee of the league announced that Syria, Saudi Arabia, Lebanon and Egypt were in favour of expelling Jordan.

Egypt. The crown council deprived Princess Fathia of her title following her marriage in San Francisco to a commoner.

France. The National Assembly, by 320 votes to 179, passed a resolution that would permit the Comte de Paris, pretender to the French throne, to return to France.

International Court of Justice. The court started hearings on the status of South-West Africa.

17: **United States.** The Export-Import bank announced a credit of $125 million to a group of Argentine banks.

18: **Council of Europe.** Representatives of the committee of ministers and of the consultative assembly met in London and decided to create a joint committee of five representatives of the ministers and seven of the assembly.

North Atlantic Treaty. The fourth meeting of the Council ended. It was decided to set up a permanent defence organization in London.

19: **Burma.** Government forces recaptured Prome.

Commonwealth Conference. The conference at Sydney ended. Agreement was reached on the need for a programme of economic development for south and southeast Asia.

Indonesia. A treaty was signed between the republic of the United States of Indonesia and the republic of Indonesia providing for the implementation of the principle of the unitary state.

20: **Great Britain.** The points rationing system ended. (The only foods remaining on the ration were meat, butter, margarine, tea, cooking fat, cheese, sugar and sweets.)

Western Germany. A mining disaster at Gelsenkirchen caused more than 75 deaths.

21: **Great Britain.** During widespread storms in southern, central and eastern England, a tornado developed over the Chiltern hills causing considerable damage.

A conference of Labour party leaders, T.U.C. and Co-operative party representatives ended at Dorking, Surrey.

Bolivia. The government announced that 13 persons were killed and 112 wounded in rioting at La Paz on May 18 and 19.

Nicaragua. General Anastasio Samoza was elected president in succession to V. M. Román y Reyes, who died on May 6.

Peru. A severe earthquake shook parts of Peru. The city of Cuzco was destroyed.

22: **Council of Foreign Ministers.** The 253rd meeting of the deputies discussing the Austrian treaty was held in London. No progress was made.

India. Jawaharlal Nehru stated that it had been decided not to recognize the Bao Dai government in Vietnam or the Vietminh communist government.

Turkey. Celâl Bayar, leader of the Democratic party, was elected president by the Grand National Assembly. Adnan Menderes was appointed prime minister.

U.N.E.S.C.O. The fifth general conference opened in Florence. The delegates of Czechoslovakia and Hungary left in protest at the presence of Chinese Nationalist delegates.

Western Union. Naval exercises of units from the British, French and Netherlands navies started in the Bay of Biscay.

23: **Eastern Germany.** The British, United States and French governments sent notes to the Soviet government protesting at the creation of a militarized police force in Eastern Germany.

Netherlands. Queen Juliana and the Prince of the Netherlands arrived in Paris on a state visit.

South Africa. General Smuts was made a freeman of Johannesburg on the eve of his 80th birthday.

United States. The House of Representatives, by 247 votes to 88, passed the Foreign Economic Aid bill.

24: **Great Britain.** Field Marshal Earl Wavell died in London.

The Minister of Food announced that Sir Leslie Plummer had agreed to relinquish the chairmanship of the Overseas Food corporation

25: **Finland.** The Trade Union federation, the last non-Communist member of the W.F.T.U. decided to withdraw from membership.

Malta. It was announced in London and Valetta that the British government would grant Malta £1·5 million over the next five years.

Middle East. The governments of Great Britain, France and the U.S. announced that they had reached agreement on the supply of arms to Arab countries and to Israel.

26: **Council of Foreign Ministers.** The deputies met in London to fix the date of their next meeting.

Germany. The text was published of letters sent by the British, French and U.S. high commissioners in Germany to General Kotikov proposing measures to bring about the political and economic unity of Germany.

27: **Great Britain.** Petrol rationing—in force from Sept. 1939—was ended.

Bulgaria. Vladimir Poptomov was replaced as foreign minister by Mincho Neychev.

Horse Racing. M. Boussac's Galcador, ridden by W. R. Johnstone, won the Derby at Epsom.

28: **Albania.** Elections were held for the People's Assembly. 99% of the electorate voted; 98% of the votes were cast for candidates of the Democratic Front.

Germany. The Free German Youth, during a great Whitsun rally in Berlin, marched past the East German government in the Lustgarten.

29: **Syria.** The prime minister, Khaled el Azam, and his government resigned. He was asked to form a new government.

30: **Asian Conference.** A conference of seven southeast Asian and Pacific countries ended at Baguio, Philippines.

Hungary. The government announced the closing of a 10-mi. zone along the Yugoslav frontier.

Korea. A general election was held in South Korea. Nine persons were killed in disturbances. Of the 2,237 candidates, 30 had been arrested after the discovery of a "Communist spy-ring."

Yugoslavia. The government recalled its diplomatic staff in Tirana, Albania, and closed the legation.

31: **France.** Jean Mons was replaced as resident general of Tunisia by Louis Périllier.

New Zealand. The immediate ending of petrol rationing was announced.

South Africa. The House of Assembly gave a second reading, by 69 votes to 61, to the Group Areas bill.

Cricket. In the test trial at Bradford the Rest were dismissed for 27 runs, J. Laker taking 8 wickets for 2 runs.

JUNE

1: **Poland.** The government decided to create three new provinces to be known as Koszalin, Opole and Zielona Góra.

United Nations. The Soviet representatives left the Trusteeship council in protest at the presence of Chinese Nationalists.

Aviation. The first permanent passenger helicopter service—from Liverpool to Cardiff—was started.

2: **India.** Jawaharlal Nehru left India for a tour of southeast Asian countries.

South Africa. Dr. Malan announced that the government had decided not to recognize the Chinese Communist government.

3: **North Atlantic Treaty.** The defence ministers of Great Britain, Norway and Denmark met in London.

4: **Belgium.** A general election was held. In both the Chamber of Deputies and the Senate the Social Christian party obtained a small overall majority.

Japan. Elections were held for 132 seats in the House of Councillors. The Liberals (the government party) obtained 76 seats. The Socialists vote was doubled, the Communist halved, compared with 1949.

Switzerland. A referendum was held on a law proposing to withdraw the power of levying direct taxes from the federal government. The proposed law was defeated by 485,400 votes to 266,800.

Syria. A new cabinet was formed by Nazim el Kudsy.

5: **Brunei.** Omar Ali Saifudin, brother of the last sultan, was chosen as the new sultan of Brunei.

Eastern Germany-Poland. A German delegation led by Walter Ulbricht arrived in Warsaw. Agreement was reached on the Oder-Neisse frontier between Germany and Poland.

Egypt. Field Marshal Sir William Slim held discussions in Cairo with the prime minister and foreign minister.

United States. President Truman signed the Foreign Aid bill.

Mountaineering. Two Frenchmen climbed the 26,492-ft. Annapurna peak in Nepal. This became the highest peak climbed by man.

6: **Belgium.** G. Eyskens, prime minister, placed the resignation of his cabinet in the hands of the regent.

Malta. Dr. P. Boffa's government was defeated by 21 votes to 18 on a motion to consider the 1950-51 budget.

7: **Eastern Germany.** It was announced that the commandant of Berlin, General A. G. Kotikov, was to be replaced by S. A. Dienghin.

Indonesia. Jawaharlal Nehru, prime minister of India, arrived at Jakarta at the beginning of a ten-day visit to Indonesia.

Soviet Union. The government sent notes on the administration of the Antarctica to the governments of Great Britain, Argentina, Australia, France, New Zealand, Norway and the U.S.

8: **Great Britain.** Seven barons were created in the Birthday Honours. They included Lewis Silkin, D. R. Rees-Williams, Sir Gilbert Campion and E. W. Hives.

Belgium. A new Social Christian government under Jean Duvieusart was sworn in.

Burma-China. Diplomatic relations were established.

India. The government announced that it would not participate in the proposed round table conference between South Africa, India and Pakistan.

Western Germany. The Allied High commission announced that the Federal German government would have greater freedom to negotiate and conclude international agreements other than on trade and payments.

9: **Great Britain.** The report was published of the disturbances in Nigeria in Nov. 1949. The view was expressed that the chief commissioner for the eastern provinces had erred in treating the miners' dispute at Enugu as political rather than industrial.

Finland. Urho Kekkonen, prime minister, arrived in Moscow to sign the Finnish-Soviet trade agreement.

10: **Singapore.** Field Marshal Sir William Slim arrived in Singapore.

11: **Great Britain.** James Griffiths and John Strachey returned to London after visiting the far east.

12: **Arab League.** The council of the league met in Alexandria.

Austria. The governments of Great Britain, France and the U.S. sent notes to the Soviet Union concerning Austria. They asked the Soviet Union to appoint a civilian high commissioner.

Soviet Union. The Supreme Soviet met. Mikhail Yasnov was elected chairman of the Soviet of the Union, and Z. Shayakhmetov, chairman of the Soviet of Nationalities.

Cricket. England won the first test against the West Indies at Old Trafford, Manchester, by 202 runs.

13: **Great Britain.** Parliament re-assembled after the Whitsun recess. The prime minister, in a statement on the Schuman plan said that the British government was unable to accept commitments in advance. The Labour party issued a policy statement on European unity.

Malta. Dr. Boffa, prime minister, requested the governor to dissolve the Legislative Assembly.

Peru. A revolt, led by Francisco J. Mostajo, broke out in Arequipa.

South Africa. The House of Assembly, by 73 votes to 58, gave a third reading to the Group Areas bill.

Soviet Union. A. G. Zverev, minister of finance, presented his budget to the Supreme Soviet. Revenue was estimated at 432,000 million roubles and expenditure at 427,937 million roubles.

Soviet Union-Finland. A five-year trade agreement was signed in Moscow.

U.N.E.S.C.O. At the general conference in Florence, Dr. Jaime Torres Bodet, director general, submitted his resignation in protest at the inadequate budget for the organization.

14: **Belgium.** The government rejected a plan to give further credits of Belgian francs to finance intra-European trade.

Netherlands. The minister of economic affairs, J. R. M. Van Der Brink, announced that the Netherlands had reserved freedom of action in case the Schuman plan proved to be impracticable.

O.E.E.C. The Netherlands government circulated proposals for the integration of European economies.

United Nations. The Trusteeship council voted in favour of returning the Jerusalem question to the general assembly.

15: **Great Britain.** The first German consul-general in London since 1939 arrived in London.

Peru. The revolt was quelled. More than 40 persons had been killed.

U.N.E.S.C.O. Dr. Jaime Torres Bodet withdrew his resignation.

Western Germany. The Bundestag voted by 220 votes to 152 to join the Council of Europe.

16: **Trieste.** The governments of Great Britain, France and the U.S. rejected the Soviet note of April 20 in which the Soviet government claimed that the western powers had violated the Italian peace treaty.

United States. President Truman appointed W. Averell Harriman, E.C.A. representative in Europe, to be his special assistant.

17: **Africa.** A 20-yr. convention relating to the port of Beira and the Beira railway was signed in Lisbon by representatives of the British, Portuguese and Southern Rhodesian governments.

Arab League. Egypt, Saudi Arabia, Syria, the Lebanon and the Yemen signed a collective security pact. Iraq did not sign and Jordan was not present.

Australia. Elections were held in New South Wales. The Labour government was returned with a majority of two (including the two independent members).

India. Jawaharlal Nehru arrived in Singapore.

Soviet Union. The Soviet of the Union and the Soviet of Nationalities both adopted the budget. The proposed income was increased to 433,167 million roubles.

18: **Western Germany.** Elections were held in North Rhine-Westphalia. The Christian Democrats remained the largest party.

19: **Egypt.** King Farouk ordered the enlargement of the Senate by 30 seats. A number of senators were removed and replaced by Wafdists.

New Zealand. The prime minister announced that the Legislative Council would be abolished in the next parliamentary session.

South Africa. The Group Areas bill was given a third reading in the Senate by 20 votes to 19.

20: **India.** Jawaharlal Nehru arrived in Rangoon.

Schuman Plan. A six-power conference opened in Paris. The countries represented were Belgium, France, Italy, Luxembourg, Netherlands and Western Germany.

South Africa. During a debate in the House of Assembly on the Suppression of Communism bill the Communist party announced its dissolution.

United States. Dean Acheson, addressing the annual conference of state governors at White Sulphur Springs, West Virginia, spoke of U.S. assistance to under-developed areas.

21: **South Africa.** The Suppression of Communism bill was read a third time in the House of Assembly by 61 votes to 49.

22: **Argentina.** The Senate approved a declaration affirming Argentine sovereignty over the Falkland islands.

France. The government was defeated when the National Assembly approved, by 351 votes to 201, a Socialist bill to increase civil servants' salaries.

New Zealand. 25 members were appointed to the Legislative Council thus giving the government a majority.

South Africa. The president of the Senate used his casting vote to secure a second reading of the Suppression of Communism bill.

War Crimes. The court at Los Negros, Philippines, found Takuma Nishimura, a former lieut. general in the Japanese army, guilty of the murder of 110 Australian and 35 Indian prisoners of war and sentenced him to death.

23: **Australia.** Parliament rose for the winter recess without passing the Communist Party Dissolution bill.

Egypt. The Liberal, Saadist, Nationalist and Kotla parliamentary groups decided to boycott the sittings of the Senate and the Chamber of Deputies.

24: **Council of Europe.** The joint committee of representatives of the committee of ministers and the consultative assembly met in Strasbourg.

France. The Bidault government was defeated on a motion of confidence in the National Assembly by 230 votes to 352.

North Atlantic Treaty. The defence ministers of Great Britain, Denmark and Norway met in Copenhagen.

Football. The World Cup series opened in Rio de Janeiro.

25: **Australia.** The government of Victoria resigned after the governor had refused a dissolution.

Korea. Troops from the Democratic People's Republic of Korea (North Korea) invaded the territory of the Republic of Korea (South Korea). The Ongjin peninsular was evacuated. The Security council met at Lake Success. By 9 votes to 0 (U.S.S.R. absent and Yugoslavia abstaining) the council declared the fighting in Korea a threat to international peace and called upon North Korea to cease hostilities forthwith and to retire to the 38th parallel.

26: **France.** President Auriol invited Henri Queuille, Radical, to try to form a government.

Korea. Troops from North Korea entered Suisak, seven miles north of Seoul. A seven-man military committee was formed in North Korea under Kim Ir Sung.

Persia. A new cabinet was formed by General Ali Razmara, formerly chief of staff.

South Africa. A day of protest by non-Europeans in South Africa passed off quietly.

27: **Great Britain.** The government's policy on the Schuman plan was approved in the House of Commons by 309 votes to 296.

A private member's bill, the Liberties of the Subject bill, was given a second reading in the House of Lords by 66 votes to 24, a majority of 42 against the government.

Korea. President Truman ordered U.S. planes and warships to give cover and support to the South Koreans, and directed the U.S. 7th fleet to be prepared to intervene to prevent any attack on Formosa. He also announced increased military aid to the Philippines and Indo-China. Clement Attlee in the House of Commons endorsed President Truman's statement. The Security council, by 7 votes to 1 (Yugoslavia)—the U.S.S.R. was absent and Egypt and India abstained—denounced the attack in Korea as a breach of the peace and authorized all members of the U.N. to help the South Koreans.

28: **Burma.** The agreement of the Commonwealth loan to Burma was signed in Rangoon.

Japan. Shigeru Yoshida formed a new government. He retained the posts of prime minister and foreign minister.

Korea. The British government put their naval forces in the Pacific at the disposal of the United Nations. The North Koreans occupied Seoul. The South Korean government moved to Taejon.

29: **Great Britain.** Sir David Kelly, ambassador in Moscow, called at the Soviet foreign office and expressed the British hope that the Soviet Union would co-operate in effecting a peaceful settlement in Korea.

Indo-China. A conference opened at Pau, France, to discuss the establishment of certain federal services.

Korea. General Douglas MacArthur visited Korea. The South Koreans recaptured Kimpo airport. The Australian and New Zealand governments put naval forces at the disposal of the United Nations. India announced its support for the Security council resolution of June 27 on Korea.

United Nations. The Commission for Eritrea presented three separate reports to the general assembly.

Cricket. West Indies beat England by 326 runs in the second test match at Lords.

30: **Australia.** A new Labour government in New South Wales led by James McGirr, prime minister from 1947, was sworn in.

Belgium. Jean Duvieusart's government obtained a vote of confidence in the House of Representatives by 108 votes to 100.

Korea. General MacArthur was authorized "to use certain supporting ground units" in Korea. It was announced that 23 member states had endorsed the security council decision of June 28.

JULY

1: **France.** Henri Queuille was elected prime minister by 363 votes to 208 in the National Assembly.

Jordan. A new currency was introduced. The Palestine pound was replaced by the Jordan dinar, and Jordan re-entered the sterling area.

2: **France.** Henri Queuille announced his cabinet. Robert Schuman remained foreign minister and Paul Reynaud was appointed minister for associated states and far east.

Korea. R.A.A.F. aircraft went into action for the first time.

Pakistan. Liaquat Ali Khan arrived in London from the United States.

Peru. Presidential elections were held. General Manuel A. Odría was elected.

Football. England was beaten by Spain in the World cup at Rio de Janeiro, and was thus eliminated from the competition.

3: **Korea.** U.S. marines and marine air units were ordered to Japan. The North Korean forces were pushing forward on a wide front. Two New Zealand frigates left for Korean waters.

United Nations. The 11th session of the Economic and Social council opened in Geneva. The Soviet, Polish and Czechoslovak delegates were absent.

4: **France.** The National Assembly unseated the Queuille government by 334 votes to 221.

Korea. North Korean forces captured the town and airfield of Suwon. A. A. Gromyko, Soviet deputy foreign minister, described the events in Korea as "an internal conflict between two groups in one state" and accused the United States of aggression. Kim Ir Sung was appointed supreme commander of North Korean forces. The North Korean government announced measures for agrarian reform in South Korea.

5: **Great Britain.** The House of Commons approved, without a division, the government's policy on Korea.

France. Guy Mollet, secretary general of the Socialist party, agreed to undertake a "mission of inquiry" to form a government.

6: **Korea.** The North Koreans captured Pyongtaek and Chonan, 23 mi. and 37 mi. respectively south of Suwon. The United Nations announced that 45 member states nad replied to the Security council resolution—3 states, U.S.S.R., Poland, and Czechoslovakia, had rejected the appeal.

Poland-Eastern Germany. The frontier treaty, negotiated in Warsaw in June, was signed by Józef Cyrankiewicz and Otto Grotewohl in Zgorzelec (Görlitz).

Soviet Union. At the request of A. Gromyko, deputy foreign minister, the British ambassador called at the Soviet foreign office.

7: **Korea.** The U.N. Security council approved a unified command for the U.N. forces in Korea. The United States was asked to name a commander.

O.E.E.C. The council approved a scheme for a European Payments union.

United States. The government decided to use conscription to bring its forces up to strength required for the fighting in Korea.

Golf. A. D. Locke of South Africa won the Open championship at Troon, Ayrshire, for the second year in succession.

Lawn Tennis. B. Patty (U.S.A.) beat F. A. Sedgman (Australia) in the final of the men's singles at Wimbledon.

8: **France.** René Pleven accepted the president's invitation to form a government.

Korea. The North Koreans occupied Chonan.

Trieste. The Soviet government replied to the notes of Great Britain, France and the United States on June 16 and again maintained that the responsibility for the non-implementation of the Italian peace treaty concerning Trieste lay with the western powers.

Lawn Tennis. Miss Louise Brough (U.S.A.) won the women's singles, the women's doubles with Mrs. M. du Pont (U.S.A.) and the mixed doubles with E. W. Sturgess (South Africa) at Wimbledon.

9: **Western Germany.** Elections were held for a new Landtag in Schleswig-Holstein.

10: **Great Britain.** The Finance bill was given a third reading in the House of Commons. The government had received majorities in all the divisions on Opposition amendments.

Council of Foreign Ministers. The deputies held the 256th meeting in London to discuss the Austrian treaty. The Soviet delegate, G. N. Zarubin, repeated the Soviet view on Trieste and the deputies adjourned until Sept. 7.

Korea. The United Nations announced that 48 member states were supporting the Security council resolution. In addition 3 non-members—Ceylon, Italy and Jordan—had announced their support.

World Power Conference. The fourth World Power conference opened in London under the chairmanship of Sir Harold Hartley.

11: **France.** René Pleven was elected prime minister in the National Assembly by 373 votes to 185.

International Court of Justice. The court gave an advisory opinion on the international status of South-West Africa. The court declared unanimously that South-West Africa was still under mandate and also declared that the international obligations from the mandate were still incumbent on the South African government.

Korea. The North Koreans broke through the U.S. line between Chonui and Chochiwon. The North Koreans occupied Chochiwon.

International Bank. Pakistan joined the bank and the International Monetary fund.

Soviet Union. The government sent a note to United Nations challenging the decision of the Security council regarding a unified command in Korea and the use of the United Nations flag. A. Gromyko, deputy foreign minister, again received the British ambassador.

12: **France.** René Pleven announced his new cabinet. R. Schuman remained foreign minister. Guy Mollet was appointed minister in charge of Council of Europe affairs.

Korea. The U.S. forces withdrew to the south bank of the Kum river.

13: **Australia.** The prime minister, R. G. Menzies, arrived in London.

France. The Pleven government received a vote of confidence by 335 votes to 226.

India. Jawaharlal Nehru in a letter to Marshal Stalin appealed to him to use his influence to help to find a basis for a final solution of the Korean situation.

Korea. U.S. Superfortresses dropped 500 tons of bombs on military targets in North Korea. The United Nations flag was flown for the first time over General MacArthur's headquarters in Tokyo.

Persia. The shah offered to mediate in the Pakistan-Afghanistan dispute.

14: **Great Britain.** Several naval ammunition barges blew up in Portsmouth harbour. Sabotage was suspected.

Korea. The secretary general of the United Nations telegraphed all member-states asking them to provide further assistance to the South Koreans.

Sierra Leone. Proposals for a new constitution in the colony were published.

Yugoslavia. The government sent a note to Bulgaria demanding an immediate end to frontier provocations.

15: **Korea.** The North Koreans crossed the Kum river.

Persia. The government replied to the Soviet note complaining about the alleged conduct of Americans engaged in oil surveys near the Soviet-Persian border. The Persian government stated that to avoid friction it would engage only Persian subjects to make the surveys.

Soviet Union. Marshal Stalin, in a reply to Pandit Nehru's letter, stated that he believed a settlement of the Korean question could only be achieved if the Security council heard representatives of the Korean people and of the People's Government of China.

16: **Korea.** The U.S. defence on the Kum river collapsed.

Football. Uruguay beat Brazil by 2 goals to 1 to win the World cup at Rio de Janeiro.

17: **Council of Europe.** It was announced that the Saar and Western Germany had accepted the statute of the council and had become associate members.

Korea. U.S. forces abandoned the airfield at Taejon.

Soviet Union-Afghanistan. A four-year trade agreement was signed in Moscow.

18: **Indonesia.** The Ministry of Defence announced that landings had taken place on Buru against the rebel " Republic of the South Moluccas."

19: **United States.** President Truman in a message to congress asked for $10,000 million for the armed forces. He also reported that he had empowered the secretary of defence to call up as many men as necessary.

20: **Great Britain.** In the House of Commons Clement Attlee welcomed President Truman's statement on July 19. He also reported on the talks in Moscow between the British ambassador, Sir David Kelly, and A. Gromyko, Soviet deputy foreign minister.

Belgium. A joint session of both houses of parliament recalled King Leopold to the throne after six years of exile. 198 votes were cast in favour, none against—the opposition parties leaving the chamber before the vote was taken.

India. Liaquat Ali Khan arrived in New Delhi for talks with Jawaharlal Nehru. Both ministers later met Sir Owen Dixon, U.N. mediator on Kashmir.

Indonesia. A conference was held in Jakarta between the federal state and the republic of Indonesia. Many issues concerning the establishment of a unitary state were settled.

Korea. Taejon was occupied by the North Koreans.

Western Union. The five defence ministers met in Paris. The ministers considered the international situation and decided on increasing the defensive power of the western Union land, air and sea forces.

21: **Argentina.** The government suspended meat shipments to Britain because of the failure to reach agreement with the British government on prices.

Belgium. The prime minister, Jean Duvieusart, flew to Geneva to see King Leopold.

22: **Belgium.** King Leopold, accompanied by Prince Baudouin and Prince Albert, returned to Belgium after six years of exile. He broadcast to his peoples and appealed for unity. The Socialist ministers of state resigned and the Liberal ministers refused to attend a meeting of the state council. The government formally resigned and was asked by the king to remain in office.

Canada. W. L. Mackenzie King died at Kingsmere, near Ottawa.

23: **Korea.** The North Koreans occupied Kwangchwu, capital of South Chunra province, and Boyn.

24: **Commonwealth.** The standing committee of the Commonwealth Consultative committee met in Colombo.

India. Jawaharlal Nehru and Liaquat Ali Khan met in New Delhi to discuss the working of the minorities agreement. The five-day tripartite talks on Kashmir ended.

Guatemala. After disturbances and strikes the government suspended all civil rights for thirty days.

25: **Baltic Sea.** Denmark and Sweden jointly accused the Soviet Union of " encroaching upon the freedom of the open sea " in a protest on the Soviet claim for a 12-mi. limit in the Baltic.

North Atlantic Treaty. The first meeting of the deputies' council met in London. Charles Spoffard (U.S.) was elected chairman.

Cricket. West Indies beat England by 10 wickets in the third test match at Nottingham.

26: **Great Britain.** At the opening of a two-day debate on defence, Emanuel Shinwell, minister of defence, announced that a self-contained British force would be sent to Korea.

Indonesia. The Royal Netherlands Indonesian army ceased to exist.

Korea. The New Zealand government decided to send a special combat unit to Korea, and the Australian government decided to provide ground forces.

United States. President Truman signed the bill authorizing $1,222·5 million in arms aid to the North Atlantic treaty and other nations.

27: **Great Britain.** The debate on defence continued. Winston Churchill moved that the debate be continued in private session. This was defeated by one vote.

Australia. R. G. Menzies arrived in Washington.

United Nations. Yakov Malik announced that the Soviet Union was resuming its seat on the Security council on Aug. 1.

28: **Israel.** It was announced that *de jure* recognition had been granted by New Zealand.

Korea. The North Koreans launched attacks all along the front and occupied Hatong and Kwangyang.

North Atlantic Treaty. The council of deputies unanimously approved recommendations designed to accelerate defence production.

Aviation. British European Airways used the Vickers Viscount jet airliner on the London-Paris route. This was the first time a jet aircraft was used on a regular scheduled service.

29: **Belgium.** Disturbances took place all day in Brussels.

30: **Great Britain.** C. R. Attlee broadcast an appeal for increased production, personal service and a close watch on the " enemy within."

Belgium. Anti-Leopold disturbances increased in many parts of the country. Three men were shot by police near Liége. J. Duvieusart called on King Leopold during the evening.

31: **Great Britain.** Patrick Gordon-Walker, secretary of state for commonwealth relations, arrived in Australia from New Zealand.

China. General MacArthur arrived in Formosa for two-day talks with Chiang Kai-shek.

Egypt. The Senate and Chamber of Deputies approved an addition to the penal code forbidding the publication of news concerning the royal family unless issued by the minister of the interior.

India. An emergency session of the parliament opened in New Delhi. Hyderabad was represented for the first time.

Korea. The U.S. 2nd Infantry division arrived at Pusan. The North Koreans continued to advance and occupied Chinju.

Nepal-India. Treaties of peace and friendship and of trade and commerce were signed at Kathmandu.

Portugal. Dr. Salazar reshuffled his cabinet and created three new ministries.

AUGUST

1: **Belgium.** King Leopold's agreement with the leading political parties was announced. He would transfer the royal prerogatives to Prince Baudouin at once, and would abdicate on Sept. 7, 1951—Prince Baudouin's 21st birthday.

Korea. North Korean troops entered Masan.

United Nations. Yakov Malik returned to the Security council. As president he ruled that Dr. T. F. Tsiang was not the legal representative of China. He was over-ruled by 8 votes to 3 (Soviet Union, India and Yugoslavia).

2: **Nigeria.** 30,000 technicians and clerks employed by the United Africa company started a strike.

Western Union. The ninth session of the consultative council was held at The Hague.

3: **Great Britain.** Details were announced of the government's defence plan. It was estimated that £3,400 million would be spent in three years, but this would depend on the amount of U.S. aid.

Council of Europe. The committee of ministers met at Strasbourg for their fifth session.

Pakistan. The government accepted Persia's offer to mediate in the dispute with Afghanistan.

United Nations. The U.S. proposal that the Korean situation should be the only item on the Security council agenda was approved by 8 votes to 1. On a proposal to discuss the question of Chinese representation the voting was 5-5.

4: **Great Britain.** Raymond Blackburn, Labour M.P. for Northfield, Birmingham, resigned from the Labour party.

Venezuela. A severe earthquake shook El Tocuyo, 200 mi. west of Caracas. More than 100 deaths were reported.

6: **France.** The government handed its memorandum on defence to the U.S. ambassador. It estimated an expenditure in three years of about £2,000 million.

7: **Colombia.** Laureano Gómez was sworn in as 48th president of Colombia.

Council of Europe. Paul-Henri Spaak was re-elected president of the consultative assembly by 90 votes to 23. The four vice-presidents elected were: Lord Layton (Great Britain), F. de Menthon (France), S. Jocini (Italy) and A. Gjores (Sweden). The Saar and Western Germany took their seats in the assembly.

Korea. U.S. troops launched an attack east of Chinju.

8: **Belgium.** Jean Duvieusart, prime minister, announced that the government intended to propose an increase in defence expenditure of Fr. 5,000 million.

Indonesia. The Ministry of Defence announced that a cease-fire had been achieved in the fighting in Macassar.

Swimming. Florence Chadwick (U.S.) completed her crossing of the English channel in 13 hr. 23 min.—1 hr. 11 min. faster than the previous fastest time by a woman.

9: **Belgium.** The Chamber of Representatives passed the bill transferring the royal prerogatives to Prince Baudouin by 165 votes to 27.

Denmark. Hans Hedtoft, prime minister, announced that he would ask the king to dissolve parliament. The lower house passed a bill authorizing an additional expenditure of Kr. 350 million for defence over the next two years.

Korea. U.S. forces continued to drive North Korean forces back across the Naktong river.

10: **Belgium.** The Senate approved the bill to transfer the royal powers by 121 votes to 22.

Korea. United States forces continued their advance towards Chinju. The North Koreans occupied Pohang.

United Nations. The eleven members of the Security council met informally to discuss the Soviet obstruction in the council, but no agreement was reached.

11: **Great Britain.** The prime minister announced that parliament would be recalled on Sept. 12.

Belgium. Prince Baudouin was sworn in as prince royal. Jean Duvieusart, prime minister, submitted the resignation of his government.

Council of Europe. A resolution introduced by Winston Churchill calling for the creation of a European army was carried by 89 votes to 5, with 27 abstentions.

12: **Korea.** Two British correspondents, Ian Morrison, *The Times*, and Christopher Buckley, *Daily Telegraph*, were killed.

Nigeria. 23 people were killed in inter-tribal rioting in eastern Nigeria.

13: **Australia.** Robert Menzies, prime minister, arrived in Tokyo.

Belgium. Paul Van Zeeland accepted the prince royal's invitation to try to form a government.

14: **Belgium.** Princess de Rethy, wife of King Leopold, returned to Belgium after an exile of six years.

Indonesia. The House of Assembly approved a provisional unitary constitution by 90 votes to 18.

United Nations. In the Security council the Indian delegate proposed the setting up of a commission of the six non-permanent members to prepare plans for the future of Korea.

15: **Great Britain.** Princess Elizabeth gave birth to a daughter at Clarence House, London, at 11.50 a.m.

Arab League. The political committee of the league met in Alexandria.

Belgium. A new Social Christian government was formed. Joseph Pholien became prime minister; Paul van Zeeland remained foreign minister.

India. Severe earth tremors rocked parts of eastern India. Most damage was done in Upper Assam.

Korea. North Korea forces occupied Kosung.

16: **Great Britain.** The prime minister met Winston Churchill and Clement Davies who had asked for an earlier recall of parliament. Mr. Attlee was unable to meet their request.

Burma. The government announced that its forces had liberated the entire Henzada district in western Burma.

Cricket. West Indies beat England by an innings and 56 runs in the fourth and last test match at the Oval. West Indies thus won the rubber by three matches to one.

17: **Belgium.** The Chamber of Representatives passed a vote of confidence in the government of J. Pholien by 107 votes to 78.

China. Chinese batteries mounted on Taitami and Puntin islands opened fire on H.M.S. "Concord." The ship was not damaged but there was one minor casualty.

Greece. The nine Liberal ministers tendered their resignations.

Indonesia. On the fifth anniversary of the declaration of the republic Indonesia was declared a unitary state. President Sukarno in a speech in Jakarta re-affirmed the Indonesian claim to Irian (Dutch New Guinea). The government formally resigned.

Korea. The North Koreans launched a big offensive east of the Naktong river.

18: **Belgium.** Julien Lahaut, leader of the Communist party, was shot dead in his home at Seraing.

The Senate, by 82 votes to 61, passed a motion of confidence in the government.

Council of Europe. The consultative assembly adopted a series of resolutions to reinforce the council and also its own authority.

Greece. The cabinet resigned. Sophocles Venizelos, Liberal, was asked to form a new government.

19: **Korea.** The government of Syngman Rhee left Taegu for Pusan.

New Zealand. The Legislative Council Abolition bill passed through its final stages.

20: **Great Britain.** The War Office announced that an infantry force was being sent immediately from Hong Kong to Korea.

21: **Great Britain.** The Labour party issued a statement of policy entitled *Labour and the New Society*. It proposed a world plan for mutual assistance to succeed the European Recovery programme in 1952.

Bechuanaland. Seretse Khama, exiled chief-designate of the Bamangwato, arrived in London, with his wife and daughter.

Greece. A partial cabinet of members of the Liberal party was sworn in under Sophocles Venizelos as prime minister.

United States. The Senate, by 84 votes to 3, passed the Economic Controls bill.

22: **Canada.** A national railway strike began. Louis St. Laurent, prime minister, announced the recall of parliament.

France. The government decided to send a battalion of troops to Korea.

International Bank. It was announced that the bank would make a loan of $100 million to Australia.

North Atlantic Treaty. The council of deputies opened its second session.

Southeast Asia. A conference of governors of British territories opened in Bukit Serene, Malaya.

Swimming. 24 swimmers left Cap Griz Nez in the *Daily Mail* international cross-channel swimming race. 9 of them, 7 men and 2 women, completed the crossing.

23: **Kashmir.** The U.N. mediator, Sir Owen Dixon, left Karachi for London and Lake Success to report the failure of his mission. Liaquat Ali Khan said the responsibility for the failure "lies squarely on the shoulders of India."

Netherlands. It was announced that 2,000 infantrymen would be sent to Korea.

United States. Two trade unions called for a nation-wide rail strike to start on Aug. 28.

24: **China.** Chou En-lai, foreign minister, cabled to the U.N. Security council asking for action to be taken against "U.S. armed aggression in Formosa."

Kashmir. Jawaharlal Nehru, in a statement in New Delhi said "I put the blame 100% on Pakistan for the whole Kashmir trouble."

25: **Council of Europe.** The consultative assembly adopted the report of its legal administrative committee expressing general approval of the draft European convention on human rights.

Hong Kong. British troops left Hong Kong for service in Korea.

Norway. The government announced that defence expenditure would be increased by £12·5 million over the next 2½ years.

Pakistan. Liaquat Ali Khan announced a gift of 400 tons of rice to the victims of the Assam earthquake in India.

United States. A proposed rail strike was called off after President Truman ordered the taking over of the nation's railways.

26: **Bulgaria.** Two former Communist ministers, Bonu Petrovski and Lubomir Kayrakov, were sentenced to life imprisonment for "passing economic information to the west."

Council of Europe. By 73 votes to 0 with 32 abstentions, the assembly approved the proposals of the economic committee on the links between the coal and steel pool and the Council of Europe.

Lawn Tennis. Australia beat the U.S. in the Davis Cup contest. The cup was won from Australia by the U.S. in 1946.

27: **China.** U.S. planes crossed the boundary between Korea and China and raided Antung airfield causing casualties.

28: **Council of Europe.** The consultative assembly adjourned its second session.

Greece. The government was enlarged by the inclusion of members of the Democratic Socialist party.

Israel. The Haifa refineries resumed operations for the first time for over two years.

Peru. General Manuel A. Odría was installed as president.

United States. President Truman reaffirmed his government's policy on Formosa after directing (on Aug. 26) General MacArthur to withdraw a statement which related Formosa to the U.S. defence position in the Pacific.

29: **Great Britain-Yemen.** Discussions began at the Foreign Office on frontier and diplomatic matters affecting Great Britain, Yemen and Aden protectorate.

Argentina. The peso was devalued from 9·4 to 14 to the pound.

China. A U.S. aircraft shot at Chinese boats on the Chinese bank of the Yalu river killing 10 and injuring 23.

Korea. British troops, the first United Nations troops to be sent to aid the United States forces, landed in Korea.

United Nations. The Security council, by 7 votes to 2 with 1 abstention, decided to place the question of Formosa on the agenda.

30: **Great Britain.** Clement Attlee, in a broadcast, announced increased pay for servicemen and an increase to 2 yr. in the period of national service.

The 112th annual meeting of the British Association for the Advancement of Science opened in Birmingham under the presidency of Sir Harold Hartley.

Canada. A bill to end the Canadian railway strike was given a third reading in the House of Commons. The strike ended the same evening.

South-West Africa. Voting took place for six members to sit in the Union House of Assembly, and for 18 members in the South-West African Legislative Assembly. Dr. Malan's Nationalist party won the 6 seats in the Union House of Assembly and 15 of the seats in the South-West Africa Legislative Assembly.

United States. Dean Acheson reaffirmed that the U.S. had no agressive intentions towards Communist China in Formosa or elsewhere.

31: **Great Britain.** The Foreign Office announced that *British Ally*, the Russian-language newspaper published in Moscow, would close down.

India. Police opened fire on demonstrators in Bombay killing 5 and wounding 41.

United Nations. The Security council decided to add to its agenda the question of a complaint by China that a U.S. plane caused damage in China near the Korean border.

Aviation. 55 persons were killed when an American Trans-World Airlines Constellation crashed in Egypt.

SEPTEMBER

1: **Korea.** The North Koreans launched an offensive on a 50-mi. front against U.S. troops. They gained much ground east of Naktong while the Americans regained Haman in the south.

Scandinavia. A meeting of the foreign ministers of Denmark, Iceland, Norway and Sweden ended in Reykjavik. The ministers discussed the agenda for the U.N. general assembly.

2: **Belgium.** The government announced that a bill extending military service from one to two years would be laid before parliament.

France. R. Pleven, prime minister, announced that the period of military service would be increased.

India. Purshottamdas Tandon was elected president of the Indian national congress.

3. **Israel.** A conference opened in Jerusalem between cabinet ministers and Jewish leaders from the United States, Great Britain and South Africa to prepare a long-term plan for maintaining the existing rate of immigration.

4: **Greece.** The E.P.E.K. party decided not to join the government of S. Venizelos. The cabinet was completed by the inclusion of more Liberal and Democratic Socialist ministers.

Korea. The U.N. forces shot down a plane "bearing a red star." The body of a Russian was discovered.

Persia. Fighting broke out between Kurdish tribesmen and government forces near the Iraqi frontier.

5: **Commonwealth.** It was announced that the King and Queen would visit Australia and New Zealand in 1952.

Denmark. A general election was held for the lower house. Hans Hedtoft's Social Democrat party obtained 59 seats as against 57 in the old house.

Korea. The North Koreans captured Pohang.

Syria. Hashem Bey Atassi was elected president.

Tibet. A Tibetan mission arrived in New Delhi for talks with the Chinese ambassador.

Western Union. The five defence ministers held their eighth meeting.

6: **International Monetary Fund.** The annual session of the fund and of the International Bank for Reconstruction and Development opened in Paris.

Korea. The North Koreans continued their pressure against the U.N. troops on the northern front.

United Nations. Y. Malik, the Soviet delegate to the Security council, explained that the Soviet plane shot down off Korea was unarmed on a training flight from Port Arthur. A U.S. resolution seeking to isolate the Korean war was vetoed by the Soviet delegate.

7: **Great Britain.** The Trades Union congress voted in favour of abandoning the policy of wage restraint and in favour of equal pay for women.

France. The minister of the interior declared illegal the Spanish Communist party (whose headquarters were in France) and the Unified Socialist Party of Catalonia (Pyrenean France).

Syria. Nazim el Kudsi formed the first constitutional cabinet in Syria since the *coup d'état* of Husni ez Zaim in March, 1949.

Western Germany. Hans Ehard was elected president of the Bundesrat in succession to K. Arnold.

9: **Canada.** The minister of national defence announced that the Canadian regular forces had been placed on active service.

Greece. The government led by S. Venizelos was defeated on a vote of confidence by 124 votes to 106. Venizelos resigned and recommended a general election. The king called on C. Tsaldaris, Populist, to form a government.

10: **Great Britain.** 116 of 129 miners trapped in a mine at New Cumnock, Ayrshire, were brought safely to the surface.

South Africa. An exchange of notes between South Africa and Great Britain confirming the transfer of Prince Edward and Marion islands to South Africa was published.

11: **Greece.** The king called on K. Tsaldaris, S. Venizelos and G. Papandreou to collaborate in order to give Greece a strong government. Venizelos became prime minister, the other leading parties agreeing to serve in the government.

Iraq. The government led by Tewfik el Suwaidi resigned.

Malta. The final results in the general election were announced. The Nationalist party obtained 12 seats, the Malta Labour party 11, Dr. P. Boffa's Labour group 11 and others 6.

South Africa. Field Marshal Jan Christiaan Smuts died at his home near Pretoria.

United Nations. The Security council rejected a proposal to invite Chinese Communists to attend the debate on charges that U.S. planes had violated Chinese territory. The voting was 6 votes to 3 in favour with 2 abstentions, but 7 votes were necessary for a resolution to be carried.

12: **Great Britain.** Parliament reassembled for an emergency session. Clement Attlee opened a debate on defence in the House of Commons. The Conservatives supported the government.

United Nations. The Security council approved the annual report by 10 votes to 0. The Soviet delegate abstained.

United States. The foreign ministers of the U.S., Great Britain and France opened a three-day session in New York.

13: **Greece.** A three-party government under S. Venizelos was sworn in.

Denmark. King Frederik asked the outgoing prime minister, Hans Hedtoft, Socialist, to form a government.

United Nations. A U.S. proposal that a committee of inquiry should be sent to China to investigate charges of U.S. violation of the border was vetoed by the Soviet representative.

14: **Great Britain.** The government announced its intention of carrying out the Iron and Steel act at the earliest opportunity.

Foreign Ministers Conference. The conference in New York of the foreign ministers of Great Britain, France and the United States was adjourned. The ministers agreed that "immediate effective steps must be taken . . . to strengthen the defence of the free world, both in Europe and Asia."

15: **Great Britain.** The National Service bill, extending national service to 2 years was passed by the House of Commons.

Greece. The new government led by S. Venizelos received a vote of confidence with a majority of 110.

Korea. United Nations forces made a number of landings. The U.S. 10th Army corps and elements of the 1st Marine division landed at Inchon, the port for Seoul.

North Atlantic Treaty. The fifth session of the council opened in New York under the chairmanship of Dean Acheson.

16: **Iraq.** General Nuri es Said formed a new government.

17: **Bahamas.** Sir George Sandford, governor from Feb. 1950, died at Government house, Nassau.

Korea. United Nations forces captured Kimpo airfield, 15 mi. northwest of Seoul.

Malta. Paul Boffa, prime minister, resigned, and E. Mizzi, leader of the Nationalist party, was asked to form a government.

18: **India.** The government granted *de jure* recognition to Israel.

Indo-China. Vietminh forces captured the French military outpost of Dong-khe.

Korea. United Nations forces crossed the Han river and reached a point within 7 mi. of Seoul.

North Atlantic Treaty. The council "warmly welcomed" the proposal to create an integrated military force adequate enough to defend Europe.

Trinidad. The first general elections were held in the colony. The Home Rule party led by Uriah Butler and the Independents each obtained six of the 18 seats.

19: **Great Britain.** The House of Commons approved the government's proposal to take over the iron and steel industry by 306 votes to 300.

Commonwealth. Commonwealth ministers met in London to discuss economic and trade questions.

Foreign Ministers Conference. The ministers concluded their conference in New York and agreed to end the state of war with Germany, to reinforce their troops in Germany, to treat an attack on Berlin or Western Germany as an attack upon themselves and to give greater powers to the West German government including the setting up of a foreign ministry.

Korea. Troops of the U.S. 24th division crossed the Naktong river 4 mi. south of Waegwan.

O.E.E.C. The agreement setting up a European Payments union within the framework of the O.E.E.C. was signed in Paris.

United Nations. The fifth session of the general assembly opened at Flushing Meadow. The question of Chinese representation was referred to a committee.

20: **Korea.** United Nations troops cut the road to Pyongyang.

New Zealand. A state of emergency was declared because of a dock strike which had started on Sept. 15.

Norway. The parliament unanimously approved proposals for spending an additional £12·5 million on defence.

South Africa. E. G. Jansen, minister of Native affairs, was appointed governor general designate to succeed G. B. van Zyl.

United Nations. In the general assembly Dean Acheson (U.S.) submitted a plan for a world security force and for greater powers for the assembly.

21: **Great Britain.** C. R. Attlee flew to Balmoral for an audience with the King.

Indonesia. The government decided to give Irian (Dutch New Guinea) direct representation in the Indonesian parliament.

22: **Foreign Ministers Conference.** The foreign ministers of Great Britain, France and the U.S. again met in New York. The three defence ministers were also present.

New Zealand. Dockers at all New Zealand ports returned to work.

Nobel Prize. The Nobel prize committee of the Norwegian Storting decided to award the Peace prize to Ralph Bunche, former U.N. acting mediator in Palestine.

United States. President Truman vetoed the Communist Control bill. The House of Representatives over-rode the veto.

23: **Korea.** U.S. aircraft accidentally attacked men of the Argyll and Sutherland Highlanders.

United States. The Senate over-rode the President's veto on the Communist Control bill, which thus became law.

24: **Indo-China.** French forces recaptured Chucphaithan, a frontier post west of Moncay.

25: **Great Britain.** Lord Trefgarne resigned as chairman of the Colonial Development corporation.

Commonwealth Conference. A conference on economic development of south and southeast Asia opened in London.

Korea. United Nations troops captured Osan and Chochiwon, thus reducing the gap between the U.N. northern and southern armies to 25 mi.

Spain-Portugal. Dr. O. Salazar arrived at Vigo for talks with General Franco.

United Nations. Ernest Bevin, in a speech to the general assembly, pledged British support for the U.S. "peace force" plan outlined by Dean Acheson on Sept. 20.

United States. Paul Hoffman resigned as head of the E.C.A. and was succeeded by his deputy, William Foster.

26: **Great Britain.** 80 miners died and 19 escaped in a fire at Creswell colliery, near Worksop, Derbyshire.

International Court of Justice. The court began public hearings of a dispute between Peru and Colombia.

Korea. United Nations troops occupied Seoul. Troops of the U.N. northern and southern armies met south of Seoul.

Malta. E. Mizzi, leader of the Nationalist party, formed a minority government.

North Atlantic Treaty. The council announced a plan for setting up an integrated defence force for Europe under a supreme commander.

United States The resignation of Lewis Douglas as ambassador in London was announced.

27: **Great Britain.** Labour retained its seat in a by-election at North-East Leicester.

United States. Walter Sherman Gifford was nominated ambassador to Great Britain.

28: **Spain-Portugal.** It was announced that discussions on international affairs had taken place in Spain and Portugal between General Franco and Dr. Salazar.

Trade Conference. International talks on tariffs and trade opened in Torquay.

United Nations. Indonesia was admitted as the 60th member.

29: **Korea.** South Korean forces reached the 38th parallel: General MacArthur formally handed over control of Seoul to Syngman Rhee.

Sweden. The village of Surte, near Gothenburg, was wrecked when its clay foundations slid into the river valley. The Göta river, railway lines and roads were blocked.

United Nations. The Security council decided to invite the Chinese Communist government to be represented during its discussion on Formosa. Brazil and the Netherlands were elected to the Security council. After 12 ballots neither Turkey nor Lebanon secured a two-thirds majority for the third seat. Great Britain, U.S.S.R., Uruguay, Philippines, Poland and Sweden were elected to the Economic and Social council. Dominica and Thailand were elected to the Trusteeship council.

30: **Canada.** Douglas Abbott, minister of finance, announced the freeing of the Canadian dollar.

India. At a press conference in New Delhi, Jawaharlal Nehru said it would be wrong for United Nations forces to invade North Korea.

OCTOBER

1: **Korea.** General MacArthur called on the North Koreans to surrender. South Korean forces crossed into North Korea.

Vietnam. French and Vietnam forces entered the town of Thai-Nguyen, the military capital of the Vietminh forces.

2: **Great Britain.** The 49th annual conference of the Labour party opened at Margate under the chairmanship of Sam Watson.

Indonesia. An offensive was launched by Indonesian troops against Amboina island, centre of the South Moluccas republic. This was the only state still resisting incorporation into Indonesia.

Korea. South Korean forces occupied Yangyang, north of the 38th parallel.

United Nations. A. Vyshinsky put forward proposals for Korea to the political committee. His draft resolutions named the United States as the aggressor, and called for the withdrawal of the U.S. forces and the disbandment of the existing U.N. commission.

3: **Great Britain.** The Treasury announced that the gold and dollar reserves of the sterling area on Sept. 30, 1950, were £2,756 million compared with £1,340 million at the time of devaluation of sterling, Sept. 18, 1949.

Brazil. Getulio Vargas was elected president to succeed Eurico Dutra.

Islamic Conference. Ghulam Mohammed, Pakistan finance minister, in his presidential address to the second Islamic Economic conference at Tehran, called for some integration of Moslem countries on an economic basis.

4: **Commonwealth Conference.** The meetings on aid to Asia ended in London.

Pakistan. The Ministry of Defence announced that Afghan tribesmen and troops had crossed into Pakistan and were being driven back.

5: **Israel.** The cabinet conferred on the prime minister, David Ben-Gurion, the special powers formerly held by the British high commissioner, enabling him to conduct an intensive war against the black market.

7: **Tibet.** Chinese forces invaded Tibet. (This action was not made public until the end of October).

United Nations. The general assembly approved, by 47 votes to 5 with 8 abstentions, an eight-power resolution for the unification and rehabilitation of a peaceful and democratic Korea.

8: **Great Britain.** Hugh Gaitskell, minister of state for economic affairs, arrived in New York.

Korea. U.S. forces crossed the 38th parallel and South Korean troops occupied Wonsan.

Morocco. The sultan of Morocco arrived at Bordeaux on a state visist to France.

Pakistan. Jogendra Nath Mandal, Hindu minister of law, resigned.

9: **Great Britain.** The minister of supply appointed Feb. 15, 1951, as the general date of transfer of the iron and steel industry.

Denmark. Winston Churchill arrived in Copenhagen as the guest of the Danish government.

Western Germany. Gustav Heinemann, minister of the interior, resigned.

10: **Canada-United States.** The Niagara waters treaty became operative after the deposit of ratification documents.

Denmark. Winston Churchill was awarded the degree of doctor of philosophy and arts by Copenhagen university.

Morocco. The sultan of Morocco arrived in Paris.

11: **Korea.** British and Commonwealth forces advanced across the 38th parallel.
Medicine. The minister of health announced the setting up of a committee to investigate the claims of David Rees Evans to have discovered a treatment for cancer.

12: **Great Britain-Yemen.** Negotiations which opened on Aug. 29 ended. Among the subjects discussed was the setting up of diplomatic relations between the two countries.
Jordan. King Abdullah accepted the resignation of his cabinet and asked Said Pasha el Mufti to form a new government.
United Nations. The Security council notified the president of the general assembly that it had been unable to agree on a recommendation regarding the appointment of a secretary general.

13: **United States.** President Truman arrived at Honolulu on his way to a meeting with General Douglas MacArthur.

14: **Indonesia.** Mohammed Hatta, former prime minister, was elected vice-president.
Jordan. A new cabinet was formed under Said Pasha el Mufti.
United States. President Truman and General MacArthur held a three-hour meeting on Wake island. They discussed Korea and other far eastern matters.

15: **Eastern Germany.** Elections were held for both houses of parliament. 98·44% of the electorate voted.
Israel. The cabinet resigned after members of the Religious bloc had notified the prime minister, David Ben-Gurion, that they were unwilling to accept his proposed cabinet changes.

16: **Australia.** The executive of the Labour party decided to withdraw its opposition to the government's Communist Party Dissolution bill.
Israel. David Ben-Gurion proposed the formation of a caretaker cabinet until a general election.
Malta. The second parliament elected under the 1947 constitution was opened.
Western Germany. Erich Köhler resigned as president of the Bundestag.

17: **Great Britain.** The judicial committee of the Privy Council reported that in their opinion the Rev. J. G. MacManaway was disabled from sitting in the House of Commons because he was a priest of the Church of Ireland.

18: **Indo-China.** Vietminh troops entered the border town of Langson.
Israel. The Knesset rejected David Ben-Gurion's proposals for a caretaker government.
Scotland. The Queen opened the Loch Sloy scheme, the first of the major projects of the North of Scotland Hydro-Electric board to come into operation.

19: **Great Britain.** Sir Stafford Cripps resigned as chancellor of the exchequer for reasons of health. Hugh Gaitskell, minister of state for economic affairs, was appointed to succeed him.
The House of Commons declared vacant the Rev. MacManaway's seat at West Belfast.
Israel. President Weizmann asked P. Rosen, leader of the Progressive party, to try to form a government.
Korea. United Nations forces captured Pyongyang, capital of North Korea.
Tibet. Chinese troops occupied Changtu (Chamdo), northeast of Lhasa.

20: **Australia.** The Communist Party Dissolution bill received the royal assent.

21: **Great Britain.** Princess Elizabeth's second child, Princess Anne Elizabeth Alice Louise, was christened by the archbishop of York at Buckingham palace.
Germany. A statement was issued at the end of a two-day conference in Prague attended by V. Molotov and the foreign ministers of the eastern European countries and Eastern Germany. The conference proposed a four-power declaration against the remilitarization of Germany, and a peace treaty with Germany.
Jordan. King Abdullah arrived in Baghdad.

22: **Indo-China.** French forces withdrew from Loc Binh, a frontier post, and evacuated Langson.
Tibet. Chinese forces occupied Lhadzong, 250 mi. northeast of Lhasa.

23: **Arab League.** The 13th regular meeting of the council was held in Cairo. It lasted 20 min.

24: **Great Britain.** The House of Commons approved an address to the King for making arrangements for the building of the new chamber and thanked the Lords for the hospitality of their chamber for nearly ten years.
Australia. Eric Harrison, minister resident in London, was sworn in as Australian minister of the interior in London by the lord chancellor.
France. R. Pleven, prime minister, proposed the creation of a unified European defence force in which Germany could play a part.
North Atlantic Treaty. The council of deputies decided to establish an economic and financial working group at the headquarters of O.E.E.C. in Paris.

25: **Great Britain.** The Conservative party retained its seat in a by-election at Scotstoun, Glasgow.
Hugh Gaitskell took the oath as chancellor of the exchequer.
United Nations. The Security council again considered the appointment of a secretary general. Carlos Romulo (Philippines) and Charles Malik (Lebanon) each received 4 votes.

26: **Great Britain.** The King opened the new House of Commons chamber. Speakers and presiding officers of 29 Commonwealth assemblies were present. The House of Lords returned to its own chamber, which since 1941 had been occupied by the Commons.
Denmark. Hans Hedtoft's minority Labour government resigned.
Korea. South Korean patrols reached the Manchurian border north of Kojang.
Tibet. India sent a note to the Chinese expressing "deep regret" that the Chinese had invaded Tibet instead of trying to reach a settlement by negotiation.
Nobel Prize. The prize for physiology and medicine was awarded jointly to P. S. Hench and E. C. Kendall of the Mayo clinic, Rochester, Minnesota, U.S., and to T. Reichstein of Basle, Switzerland, for the discovery of Cortisone.

27: **France.** General Juin returned to France after visiting Indo-China.
Tibet. Chinese forces occupied Shoshado.

28: **France.** The bill to extend compulsory military service from 1 yr. to 18 months was passed by 414 votes to 185.
North Atlantic Treaty. The defence committee met in Washington.

29: **Sweden.** King Gustaf V died at Drottningholm castle at the age of 92 after a reign of 43 years.
Western Germany. K. Adenauer publicly rejected the French terms to allow German units to serve in a European army.

30: **Israel.** David Ben-Gurion announced the formation of a coalition government.
Nepal-Great Britain. A treaty of perpetual peace and friendship was signed in Kathmandu.
North Borneo. The newly constituted Legislative Council met for the first time.
Poland. A drastic revaluation of the złoty came into effect. The new złoty was based on gold and was at par with the Soviet rouble.
Sweden. King Gustaf VI Adolf took the royal oath.
Syria. General Sami Hinnawi, leader of the revolt against Husni ez Zaim in Aug. 1949, was shot dead in Beirut.
Tibet. In a reply to the Indian note the Chinese government reiterated its claim that Tibet was an integral part of China and a matter solely for the Chinese government.

31: **Great Britain.** The King opened parliament. The King's speech included proposals for a permanent Supplies and Service bill and the taking over of the beet sugar industry.
Italy. Palmiro Togliatti, leader of the Communist party, underwent an emergency operation for the removal of a blood clot on the brain.
Puerto Rico. An unsuccessful attempt was made on the life of the governor, Luis Muñoz Marín.
Tibet. In a further note to the Chinese government the Indian government again expressed "their hope that the Chinese government will still prefer methods of peaceful negotiation and settlement to solution under duress and by force."

NOVEMBER

1: **Roman Catholic Church.** The Pope proclaimed a dogma of the bodily assumption into heaven of the Virgin Mary.
United Nations. By 46 votes to 5 with 7 abstentions, the general assembly decided to prolong Trygve Lie's term as secretary general for three years.
United States. Two Puerto Ricans attempted to shoot their way into President Truman's home in Washington with the intention of assassinating him. One was shot dead and the other wounded. One guard was shot dead. An attempt was made to blow up the Puerto Rican government offices in New York.

2: **Great Britain.** George Bernard Shaw died at his home at Ayot St. Lawrence, Hertfordshire.
Conservatives retained their seat in a by-election at Oxford city.
Greece. S. Venizelos's coalition government resigned after disagreements with the Populist party.
Indo-China. Vietminh forces occupied Laokay.

3: **Bulgaria.** A decree became effective which permitted Soviet citizens to assume posts in Bulgaria as though they were Bulgarians.
Greece. S. Venizelos formed a Liberal-Social Democrat coalition government.
Indonesia. The Indonesian flag was again hoisted in the city of Amboina after five weeks of military operations.

Soviet Union. The government handed notes to the British, French and United States ambassadors in Moscow proposing a meeting of the Council of Foreign Ministers to consider "the question of implementing the Potsdam agreement on the demilitarization of Germany."

4: **Persia-Soviet Union.** A new trade agreement was signed in Tehran.

United Nations. The general assembly annulled its decision of Dec. 1946 calling on member states to withdraw their ambassadors or ministers from Madrid.

5: **Korea.** General MacArthur reported that Chinese Communist troops were now engaged with the U.N. forces.

6: **Great Britain.** In a division on housing the government received a majority of 12.

7: **Great Britain.** In two divisions on cost of living and controls the government received majorities of 15 and 10.

Nepal. The ruler, Maharajadhiraja Tribhuvana Bir Bikram Jung Bahadur, and his family sought asylum in the Indian embassy in Kathmandu. The crown prince's second son, aged 3, was proclaimed king.

Soviet Union. Celebrations were held to mark the 33rd anniversary of the 1917 revolution.

United States. Elections were held for the House of Representatives and 36 seats in the Senate. The final results were: Senate, Democrats 49, Republicans 47; House of Representatives, Democrats 227, Republicans 196, Independents 1.

8: **Great Britain.** The government was defeated by 6 votes in the House of Commons on a motion concerning private members' bills.

Eastern Germany. Otto Grotewohl, prime minister, announced that the government had resigned. He was asked to form a new cabinet.

France. General Boyer de la Tour du Moulin was appointed to succeed General Alessandri as commander in Tongking.

Japan. The Soviet representative attended the Allied Council for Japan for the first time since April 26.

United Nations. The Security council decided to invite Chinese Communist representatives to be present for discussion on General MacArthur's report that Chinese troops were fighting in Korea.

9: **France.** The National Assembly defeated by 466 votes to 98 a motion calling on the government to ameliorate the conditions of Marshal Petain's detention.

Sweden. King Gustaf V was buried in Riddarholm church, Stockholm. The Duke of Gloucester represented King George VI.

10: **Great Britain.** Lord Tedder was elected chancellor of Cambridge university in succession to General Smuts.

It was announced that it had been decided to establish diplomatic relations with Vietnam, Laos and Cambodia.

Nobel Prizes. The 1950 prize for literature was awarded to Earl Russell (Bertrand Russell); the 1949 prize to William Faulkner (United States); the prize for physics was awarded to Professor Cecil Powell of Bristol.

11: **France.** M. Thorez, secretary general of the French Communist party, left Paris by air for medical treatment in the Soviet Union.

World Peace Congress. It was announced that because of the action of the British government in refusing entry into Britain of many delegates the conference due to open at Sheffield on Nov. 13 would open in Warsaw on Nov. 16.

Yugoslavia. The government ordered the Albanian legation in Belgrade to be closed.

12: **Great Britain.** Remembrance day ceremonies were held throughout Britain and the Commonwealth.

Tibet. Chinese forces occupied Lho Dzong and captured Chapatsitun, the commander of the 7th Tibetan regiment.

13: **Nepal.** The exiled king of Nepal visited President Prasad in New Delhi.

United Nations. The secretary general announced the receipt of an appeal (dated Nov. 7) from the government of Tibet for aid.

Venezuela. Lieut. Colonel Carlos Delgado Chalbaud, president of the military *junta* since 1948, was shot dead in Caracas.

14: **Great Britain.** The National Coal board issued its national plan for spending £635 million on capital development before 1965.

Great Britain-Yugoslavia. It was announced that Britain had agreed to make available to Yugoslavia a credit of £3 million for the purchase of food and consumer goods.

India. In opening the winter session of parliament President Prasad announced the postponement of the first general elections from April-May 1951 to Nov.-Dec. 1951.

Venezuela. General Rafael Urbina, who shot Lieut. Colonel Chalbaud on Nov. 13, was shot while trying to escape.

Boxing. Jack Gardner beat the holder Bruce Woodcock for the British and Empire heavy-weight titles.

15: **Eastern Germany.** Otto Grotewohl presented his new National Front government to the Volkskammer. It included 5 deputy prime ministers.

16: **Great Britain.** Conservatives retained the seat in the Handsworth, Birmingham, by-election with an increased majority.

Egypt. In his speech to the parliament, King Farouk said his government would insist on the evacuation of British troops from Egyptian soil and the unification of the Nile valley under the Egyptian crown.

Greece. The new government received a vote of confidence by 164 votes to 54. The Populist party, which was excluded from the government, voted for the government.

India. The Madras government lifted its ban on the Communist party.

World Peace Congress. The World Peace congress—transferred from Sheffield—opened in Warsaw.

17: **Tibet.** The Dalai Lama was invested with full powers as the spiritual and temporal head of the state.

United Nations. The general assembly, by 50 votes to 0, approved proposals for the creation of a unified and sovereign state of Libya.

18: **Council of Europe.** The second session of the consultative assembly was resumed in Strasbourg.

19: **Indonesia.** All inhabitants of Jakarta were confined to their houses for six hours while troops and police searched for illegal arms.

Korea. U.S. troops captured Kapsan and advanced to within 16 mi. of the Manchurian border.

20: **Great Britain.** Ernest Bevin stated in the House of Commons that Great Britain had no intention of withdrawing British forces and so leaving the middle east defenceless.

Philip Noel-Baker. minister of fuel and power, announced that the National Coal board would be buying coal from abroad.

International Court of Justice. The court delivered judgement in the Colombian-Peruvian asylum case.

Netherlands-Indonesia. The second union conference opened in The Hague under the chairmanship of Willem Drees.

Scandinavia. The foreign ministers and ministers for trade of Denmark, Norway and Sweden met in Copenhagen. The Iceland minister in Copenhagen was present.

United Nations. The general assembly approved the U.S.-sponsored peace resolution by 51 votes to 5.

21: **Great Britain.** Queen Juliana and the prince of the Netherlands arrived in Britain on a state visit.

The government was defeated by 65 votes to 32 in House of Lords on a private member's bill to amend the Transport act.

22: **Great Britain.** Following demands from Conservative and Labour members, the government agreed to suspend delivery of Centurion tanks to Egypt until the foreign secretary had reported to the House of Commons on his discussions with the Egyptian foreign minister.

Austria. The three western governments sent notes to the Soviet government protesting at further Soviet interference with the Austrian police.

Commonwealth. C. R. Attlee announced in London that a conference of Commonwealth prime ministers would be held in London in Jan. 1951.

Egypt. A state of emergency was declared in Cairo, Alexandria and Port Said when students began a series of anti-British demonstrations.

Railways. 78 persons were killed in a rail crash outside New York.

23: **Great Britain.** It was confirmed that Britain had sent a message to the Chinese government reassuring it that the presence of U.N. troops in Korea was not a threat to China.

Finland. Urho Kekkonen, prime minister, announced that he would try to broaden the government.

France. The government's policy on Indo-China was approved in the National Assembly by 345 votes to 193.

Gibraltar. The Duke of Edinburgh opened the new Legislative Council.

Korea. General MacArthur launched a new offensive in Korea.

24: **China.** The people's government in the Tibetan autonomous region in Sikang was founded.

United States. President Truman announced the allocation of $16 million to provide food for the Yugoslav armed forces.

Council of Europe. The session of the consultative assembly was ended.

25: **Indo-China.** French troops retook the frontier post of Tan May.

Italy. Mount Etna began to erupt.

Korea. The North Korean and Chinese troops began a counter offensive.

Libya. The first meeting of the Libyan Constituent Assembly was held. The Mufti of Tripolitania was elected president and the assembly declared that the Emir of Cyrenaica should be king of all Libya.

Malta. Princess Elizabeth arrived by air from London.

26: **Indo-China.** A conference presided over by Bao Dai and attended by the prime minister of Vietnam, Tran Van Huu, and military commanders was held in Tongking.

Uruguay. Elections were held for the presidency. A. Martinez Trueba was elected to succeed Luis Batlle Berres.

27: **Commonwealth.** A conference of the Commonwealth Parliamentary association opened in Wellington, New Zealand.

France. The economic conference at Pau between representatives of France and Indo-China ended after five months.

India-Nepal. Two representatives of the government of Nepal arrived in New Delhi for talks with Indian ministers.

United Nations. Delegates from the Chinese People's republic attended a meeting of the Security council for the first time.

Venezuela. G. Suarez Flammerich was installed as president of the new civilian-military *junta*.

28: **Great Britain.** By 389 votes to 134 the House of Commons, on a free vote, carried an amendment to prevent the Sunday opening of the Festival of Britain fun fair.

Commonwealth. Details were published of the proposals for co-operative economic development in south and southeast Asia, known as the Colombo plan.

France. The king and queen of Denmark arrived in Paris on a state visit.

The government was defeated in the National Assembly on a Communist motion to impeach Jules Moch, minister of defence. René Pleven offered the resignation of his government to the president, but it was not accepted.

India-Pakistan. Correspondence was published between Jawaharlal Nehru and Liaquat Ali Khan on the proposed " no war " declaration.

Korea. General MacArthur reported to the United Nations that 200,000 Chinese troops were in Korea.

United Nations. General Wu Hsiu-chuan, leader of the Chinese Communist delegation, accused the United States of aggression against China, Korea, Vietnam the Philippines, Japan and other Asian countries, after Warren Austin, U.S., had accused China of aggression in Korea.

29: **Great Britain.** The House of Commons opened a two-day debate on foreign affairs.

The Ulster Unionists retained the seat in a by-election at West Belfast but with a much reduced majority.

Korea. United Nations forces, after being forced back across the Chongchon river, were in general retreat towards Sunchon.

30: **Great Britain.** At the close of the foreign affairs debate, C. R. Attlee announced that he was flying to Washington for talks with President Truman.

Labour retained its seats in by-elections at South East Bristol and Abertillery.

France. By 369 votes to 181 the National Assembly adopted a bill for constitutional reform.

Indo-China. It was announced that the frontier post of Chuc-Phai-San had been recaptured by French and Vietnam troops.

United States. President Truman stated that the use of the atomic bomb in Korea was under consideration.

DECEMBER

1: **France.** The National Assembly approved a motion of confidence in the government by 347 votes to 184.

United States. President Truman sent a message to congress asking for a further $17,978 million for defence.

2: **Great Britain.** Clement Attlee and Ernest Bevin held consultations in London with René Pleven and Robert Schuman of France.

Bulgaria-Turkey. The frontier, closed on Oct. 7, was reopened by decision of the Turkish government.

United Nations. The general assembly passed resolutions dealing with the federation of Eritrea with Ethiopia, aid to Palestinian refugees and the treatment of Indians in South Africa.

3: **Jordan.** Said Pasha el Mufti submitted the resignation of his cabinet and was succeeded by Samir Pasha el Rifai.

Nepal. Sir Esler Dening of the British Foreign Office arrived in New Delhi and left for Kathmandu accompanied by Frank Roberts, deputy high commissioner in India.

Western Germany. Elections were held in the western sectors of Berlin. The Social Democrats remained the largest party with 44·7% of the votes.

4: **Great Britain.** Sir Eric Young resigned from the National Coal board.

China. Chou En-lai, in a statement on the peace treaty with Japan, declared that Communist China should take part in preparing the treaty.

Netherlands-Indonesia. The conference on the future of Dutch New Guinea opened at The Hague.

United States. Clement Attlee met President Truman in Washington.

5: **Greece.** Princess Elizabeth and the Duke of Edinburgh arrived in Greece for a week's visit to King Paul and Queen Frederika.

India-Sikkim. A new treaty was signed in Gangtok, providing that Sikkim should continue to be a protectorate of India enjoying internal autonomy.

United Nations. Asian and Arab members appealed to Communist China and North Korea not to cross the 38th parallel.

Cricket. Australia beat England in the first test match at Brisbane by 70 runs.

6: **Great Britain.** A memorial to the first Earl of Oxford and Asquith was unveiled in the Palace of Westminster by Winston Churchill.

France. General de Lattre de Tassigny was appointed high commissioner and commander in chief in Indo-China.

Haiti. Paul E. Magloire was installed as president.

India. Jawaharlal Nehru appealed to the four great powers to try to solve the far eastern crisis by peaceful negotiations.

Korea. Chinese troops launched an attack on a 70-mi. front. Pyongyang was taken by the North Koreans.

United Nations. By 51 votes to 5 with 3 abstentions the general assembly decided to discuss the question of Chinese intervention in Korea.

7: **Great Britain.** In a statement to the House of Commons, E. Shinwell, minister of defence, said that Great Britain might have to prepare for still harder tidings but that there was no thought of withdrawal from Korea.

8: **Great Britain-United States.** C. R. Attlee and President Truman ended their talks in Washington. A joint statement announced agreement on many matters. They were ready to negotiate on Korea but repudiated appeasement.

Eastern Germany. The Supreme Court sentenced Leonhart Moog, a former finance minister in Thuringia, and three others to 15 years' imprisonment for inflicting " great damage on the national economy of the republic."

Finland. Jan Sibelius celebrated his 85th birthday. He was presented with the Grand Cross with Brilliants of the Order of the White Rose.

Hungary. The National Assembly unanimously passed the Defence of Peace law.

9: **Korea.** Half of the 20,000 U.S. and British troops fighting their way out of the Choshin area reached Hungnam.

United States. General Marshall stated that the president was considering proclaiming a national emergency.

10: **Danube.** The third session of the Danube commission opened in Galatz, Rumania.

India-Nepal. The talks in New Delhi ended. The communiqué said that the conversations were conducted in a friendly atmosphere. The two Nepalese representatives left New Delhi for Kathmandu.

Spain. General Franco called for " fair play " over Gibraltar but said that the colony was " not worth a war."

Nobel Prizes. Dr. R. Bunche was presented with the Peace prize in Oslo. The other prize winners received their awards from King Gustaf VI Adolf in Stockholm.

11: **Great Britain.** Winston Churchill was created a freeman of Portsmouth.

Singapore. Rioting broke out following the decision of the high court to adjourn hearings until Dec. 12, in the case of the Dutch girl, Maria (Bertha) Hertogh.

12: **Great Britain.** C. R. Attlee returned to London from Washington and later reported on his talks to the House of Commons.

New Zealand. Peter Fraser, prime minister from 1940 to 1949, died in Wellington.

Suez Canal. The Danish government joined Great Britain and France in protesting to Egypt against restrictions on shipping passing through the canal.

13: **Great Britain.** Hugh Gaitskell announced that the British and United States governments had agreed to suspend aid under the E.R.P. to Great Britain on Jan. 1, 1951.

Singapore. Rioting continued, but by dusk the situation was reported under control.

Suez Canal. Norway also protested to Egypt against restrictions on shipping.

United Nations. The general assembly called on South Africa to place South-West Africa under the supervision of the United Nations. The assembly again asked for further discussions on the control of atomic energy and appointed a committee to consider the question of China's representation.

14: **Great Britain.** In the House of Commons Ernest Bevin stated that Great Britain had opposed the latest drive by U.N. forces.

Indo-China. French forces began a new drive against Communist positions north-east of Hanoi.

South Africa. It was announced that South African gold mines would supply uranium to Great Britain and the U.S.

Switzerland. Eduard von Steiger was elected president of the Swiss confederation.

United Nations. The general assembly appointed a committee of three "to determine the basis on which a satisfactory cease-fire in Korea can be arranged."

15: **Council of Foreign Ministers.** The deputies again met in London to discuss the Austrian treaty. No progress was made.

Eastern Germany. The parliament passed a school law which provided that all children must be educated in state schools and also a law safeguarding peace.

India. Vallabhbhai Patel, deputy prime minister from 1947, died in Bombay.

Soviet Union. The government sent notes to the British and U.S. governments calling for the trial as a war criminal of Emperor Hirohito. The government also sent notes to Britain and France again protesting at the decisions to remilitarize Germany.

Broadcasting. The B.B.C. stated that more than 60% of its capital investment in the next three years would be spent on television.

16: **Indo-China.** J. Letourneau and General de Lattre de Tassigny, newly appointed high commissioner, arrived in Saigon.

United Nations. General Wu, delegate from Communist China, announced that China would call for the withdrawal of volunteers in Korea provided that all foreign troops were withdrawn and that Communist China was admitted to the United Nations.

17: **Italy.** P. Togliatti, Italian Communist leader, left for recuperation in the Soviet Union.

Korea. United Nations forces abandoned the Yonpo airfield near Hungnam.

18: **Great Britain.** The Treasury announced an increase in the foreign tourist allowance from £50 to £100.

Eastern Germany. A protocol was signed extending until March 1951 the Frankfurt agreement on intra-German trade.

Indo-China. The garrison of the frontier post of Dinhlap withdrew to the south.

Libya. Princess Elizabeth visited Tripoli where she inspected units of the Brigade of Guards.

North Atlantic Treaty. The fifth meeting of the North Atlantic council opened in Brussels under the chairmanship of Paul van Zeeland (Belgium). Agreement was reached on the appointment of a supreme commander and on German participation in a European army.

Poland-Eastern Germany. A German delegation, headed by Wilhelm Pieck, arrived in Warsaw.

19: **Indo-China.** The retiring high commissioner, Léon Pignon, left for France.

North Atlantic Treaty. General Dwight D. Eisenhower (U.S.) was appointed supreme commander. It was also suggested that a European director of production should be appointed as a counterpart to the military command. The council ended its meetings. The foreign ministers of Great Britain, France and the United States later met together.

Singapore. The governor, Sir Franklin Gimson, announced the setting up of an inquiry into the riots over Maria Hertogh.

20: **Belgium.** The House of Representatives passed by 105 votes to 76 a bill fixing the strength of army.

Chile. A naval expedition sailed from Valparaiso to set up a third military base in the Falkland Islands dependencies.

Soviet Union. The presidium of the Supreme Soviet instituted Stalin international prizes "for consolidation of peace among the nations."

21: **Czechoslovakia.** The National Assembly passed a law to safeguard peace.

Germany. Cardinal von Preysing, bishop of Berlin, died.

India-Nepal. Jawaharlal Nehru gave details of the Indian proposals to Nepal. These included the setting up of a constituent assembly. The Nepalese reply was still awaited.

Italy. The new central railway station in Rome was opened by President Einaudi.

United Nations. The committee of three to arrange a cease-fire in Korea sent a further message to Peking.

United States. Charles E. Wilson took office as director of defence mobilization.

22: **Great Britain.** Sir Eustace Missenden, chairman of the Railway executive, resigned.

China. Chou-En-lai, prime minister and foreign minister, rejected the United Nations appeal for a cease-fire in Korea.

Germany. The western powers replied to Soviet notes of Nov. 3 proposing four power talks on Germany. The western powers proposed that the permanent representatives at the United Nations should meet to prepare an agenda.

23: **Korea.** Lieut. General W. Walker, commander of the United States 8th army, was killed in a road accident in Korea.

Netherlands-Indonesia. The conference at The Hague on New Guinea was resumed after Mohammed Rum had returned with fresh proposals from Jakarta.

Roman Catholic Church. The Pope in his Christmas message confirmed that the tomb of St. Peter had been found under the Basilica of St. Peter, Rome.

24: **Indo-China.** An agreement was signed in Saigon giving Vietnam greater powers over internal affairs. The U.S. ambassador signed an agreement giving military aid to France and to Vietnam, Laos and Cambodia.

Korea. Syngman Rhee ordered the evacuation of civilians from Seoul.

Roman Catholic Church. The Pope declared the 1950 Holy Year ended. More than 4 million pilgrims had visited Rome during the year.

25: **Great Britain.** The King broadcast his Christmas message to the peoples of the Commonwealth from Sandringham.

It was announced that the Coronation stone had been stolen from Westminster abbey.

Bulgaria. The National Assembly passed the Defence of the Peace act.

Korea. The withdrawal of U.N. troops from Hungnam was completed.

Nepal. The two houses of parliament approved proposals for convening within three years a constituent assembly based on adult suffrage. A new cabinet of nine members was formed including representatives of the people.

26: **India.** Jawaharlal Nehru held talks in New Delhi with R. G. Menzies.

Chakravarti Rajagopalachari was appointed minister of home affairs in succession to Sardar Patel.

Korea. A unified military command was set up under General M. Ridgeway who arrived in Korea to succeed General Walker.

The South Korean minister of justice announced that 84 Koreans sentenced to death had had their sentences altered to terms of imprisonment. 1,200 Koreans under sentence of imprisonment were released.

New Zealand. The Canterbury centenary games were opened by the governor general.

27: **Commonwealth.** D. S. Senanayake (Ceylon) and S. G. Holland (New Zealand left for the Commonwealth conference in London.

Netherlands-Indonesia. The talks on New Guinea ended in a deadlock.

Pakistan. R. G. Menzies arrived in Karachi for talks with Liaquat Ali Khan.

United States-Spain. President Truman announced that he had nominated Stanton Griffis as the first ambassador to Spain since ambassadors were withdrawn in Dec. 1946.

Cricket. Australia beat England in the second test match at Melbourne by 28 runs.

28: **Benelux Countries.** A conference of the prime ministers of Belgium, Luxembourg and the Netherlands opened at The Hague.

Finland. Urho Kekkonen, prime minister, arrived in Rome "for health reasons."

Soviet Union. The presidium of the Supreme Soviet decided to divide the Ministry of the Metallurgical Industry into separate ministries for ferrous and non-ferrous metals.

Tibet. It became known that the Dalai Lama had reached Gyantse from Lhasa.

United States-India. An agreement was signed in New Delhi under President Truman's "point four" programme.

29: **Great Britain.** A petition to the King by persons who claimed to have stolen the Coronation stone, asking for the stone to be kept in Scotland, was left at a Glasgow newspaper office.

France. The National Assembly approved the expenditure of Fr. 740,000 million on armaments in 1951. Only the Communists voted against the proposal.

Gold Coast. A new constitution for the colony was published. It was announced that the first general election would be held in Feb. 8, 1951.

Poland. The Diet passed a law for the defence of peace.

Southern Rhodesia. Sir Godfrey Huggins left Salisbury for the Commonwealth conference in London.

30: **Pakistan.** Liaquat Ali Khan announced the postponement of his departure to the Commonwealth conference because it was not proposed that the problem of Kashmir should be discussed.

31: **Austria.** The president, Karl Renner, died in Vienna.

France. The special rearmament budget, providing fr. 355,000 million for national defence was adopted by the National Assembly.

India-Nepal. General Bijaya Bahadur Rana, foreign minister of Nepal, and Jawaharlal Nehru, held further talks in New Delhi.

Yugoslavia. The government granted an amnesty for 11,327 prisoners.

BOOK OF THE YEAR

ABYSSINIA: *see* ETHIOPIA.

ACCIDENTS. *Road Safety.* The Ministry of Transport continued its National Road Safety campaign in Great Britain, in which the Royal Society for the Prevention of Accidents assisted. The theme of the ministry's advertising was " Mind how you Go."

The year 1950 was dedicated to child safety. A campaign was launched on Holy Innocents' day, Dec. 28, 1949. The ministries of Transport and Education urged local authorities to co-operate in a National Children's Safety week in March, during which an amazing amount of local ingenuity was shown. Though accident statistics during the week did not show a decrease, the following month had the lowest April total of child pedestrian fatalities since 1937. For the whole year, despite the increase in accidents which was bound to occur with the return of unrationed petrol, the increase in child accidents was much smaller than in the case of adults.

Millions of posters, leaflets, bookmarks and magazines were distributed, several thousand films and exhibitions hired and many hundreds of lectures given. New films included *Mr. Jones takes the Air* (dealing with rural road safety), *Calling all Children* and *The Cockney Kids' Adventure.* The British rights of an Australian film, *Death on the Road,* were purchased. Four films were also made by the Crown Film unit: *Report on Road Safety*; a " flash " appealing to parents; and two trailers, *The Golden Rule* and *Careless and Carefree.* Five hundred thousand people visited static or mobile exhibitions of the society. The Ro.S.P.A.'s training centre was visited by 24,342 children, learner-drivers and others. A nation-wide poster competition was held for art students, designers and children.

A quarter of a million commercial transport drivers were entered in the society's annual safe-driving competition, including drivers from most of the government and service departments; 121,595 awards of silver and gold medals and diplomas were presented. Eight hundred London Transport drivers qualified for awards for 20 years or more of safe driving, totalling between them 16,000 " safe " years and 3,111,000,000 miles in safety. The number of young cyclists who successfully passed the society's cycling proficiency test was 10,000.

The society's annual National Safety congress held in October in London, was opened by the minister of transport, Alfred Barnes, and was attended by over 1,000 delegates. Proposals from accident-prevention federations all over the country were discussed.

The House of Lords held a debate in July on road safety, initiated by the Ro.S.P.A.'s president, Lord Llewellin. Lord Lucas, parliamentary secretary to the Ministry of Transport, assured the house that the ministry had a firm policy and that plans existed for a complete road system.

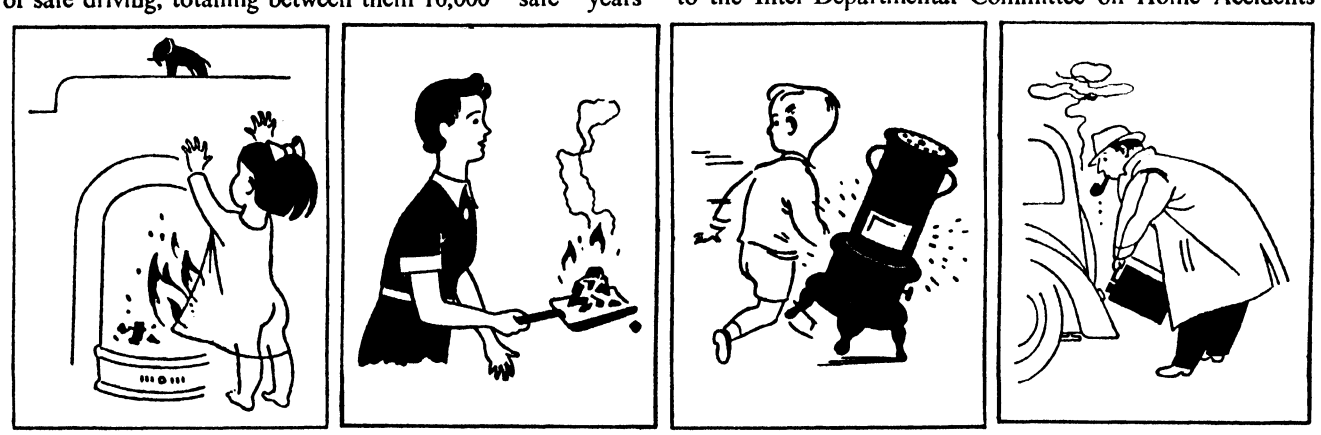
The minister of transport said that 156,516 persons were killed in road accidents from Jan. 1, 1926 to June 30, 1950; even if 1939-41, for which years figures were not available, were excluded 3,795,258 persons were injured. Reports on accidents included an analysis of the causes and circumstances of road accidents in 1949 by the commissioner of police for the metropolis, Sir Harold Scott.

The Ministry of Transport issued the Traffic Signs (Size, Colour and Type) regulations, 1950, revoking previous regulations and bringing previous authorizations up to date. The " Halt at Major Road ahead " and " Slow—Major Road ahead " signs were now legally authorized with the red triangle in the red circle resting either on its base or its apex. A select committee on estimates called for a survey into the effectiveness of road safety propaganda.

Concern was expressed over the rise in motor-cycling accidents. The scheme of the R.A.C./A.C.U. for training motor-cyclists was extended.

The Road Research laboratory, under the heading of traffic and safety, dealt with subjects such as the effect of fog; traffic behaviour on a three-lane road and a dual carriageway; the effects of a pedestrian crossing week and of zebra-marked crossings; and the relative risk to pedestrians on crossings and elsewhere.

Toys. The National Home Safety committee recommended to the Inter-Departmental Committee on Home Accidents



Cartoons from " Fire! Fire! " a 16-page booklet published in July 1950 by H. M. Stationery Office to help the public to avoid the dangers of fire in the home.

TABLE I. ACCIDENTAL DEATHS IN AND ABOUT THE HOME, ENGLAND AND WALES

	1947	1948
Falls and Crushing	4,001	3,498
Drowning	1,149	984
Burns, Scalds and Conflagrations	904	651
Suffocation	1,054	838
Others	1,482	1,315
Total	8,590	7,286

TABLE II. ACCIDENTAL DEATHS AND INJURIES IN GREAT BRITAIN

Killed

	1947	1948	1949
Railways	447	367	321
Roads	4,881	4,513	4,773
Coal Mines	618	468	460
Factories	839	861	772

Injured

	1947	1948	1949
Railways	30,113	30,050	29,311
Roads	161,318	148,884	172,006
Coal Mines	162,544	2,391*	2,180*
Factories	202,397	200,225	192,210

* Serious injuries only.

that the manufacture and importation of highly inflammable celluloid and plastic toys be prohibited or that, if this were not possible, such toys be marked "highly inflammable."

Industrial Safety. Two new volumes in the series "I.C.I. Engineering Codes and Regulations (Safety Series)" were issued by the Ro.S.P.A. entitled *Portable and Transportable Plant and Equipment* and *Buildings and Structures (Design).* A pamphlet on *Stacking of Materials* was prepared by the Industrial Safety Officers' section.

Accident prevention and working conditions in iron foundries were discussed in the House of Commons in June. New requirements for seating in factories came into force on Oct. 1. Under these, all employees who have reasonable opportunities to sit without detriment to their work must be given facilities to do so: where they can do a substantial proportion of any work sitting, the employees must be given work seats and, where necessary, foot-rests.

A campaign to reduce accidents in the furniture trade was initiated by the British Furniture Trade Joint Industrial council in conjunction with the Furniture Development council; the Ro.S.P.A. participated in a one-day conference held in London in April. The 16th International Congress of Ophthalmology and an exhibition of industrial eye-protection were held in London in July. A trade exhibition of safety devices, equipment and protective clothing was incorporated with the National Industrial Safety conference at Scarborough.

In his annual report for 1948, published in 1950, the chief inspector of factories, G. P. Barnett, reported an increase in fatalities but a decrease in the total number of accidents. The number of accidents per 1,000 workers had also steadily declined, from 40 in 1944 to 28 in 1948.

The British Electricity authority in its first report outlined the steps taken to develop a high standard of safety throughout the whole industry. (H. SU.)

United States. Accidents caused 91,000 deaths in the United States in 1949. This total was exceeded only by deaths from heart disease, cancer and cerebral haemorrhage. Information available at the end of Oct. 1950 indicated that the 1950 accidental death total would probably drop slightly below that of 1949. In addition to the deaths, accidents in 1950 also caused about 9 million non-fatal injuries.

An industrial safety highlight of 1950 was the President's Conference on Industrial Safety, when 1,500 representatives of management, labour, government and the public met in Washington in June to consider committee reports and develop plans for the reduction of industrial accidents. It appeared, late in 1950, that the year's toll of occupational accident fatalities would be a little greater than the 1949 toll of 15,000.

As 1950 drew to a close, it appeared that the number of traffic accident deaths would be nearly 35,000—the largest annual total since 1941. This increase in deaths was apparently matched by the increase in miles travelled by motor vehicles. Key committee members of the President's Highway Safety Conference met in Chicago in May 1950 to appraise progress and plan goals for further achievement.

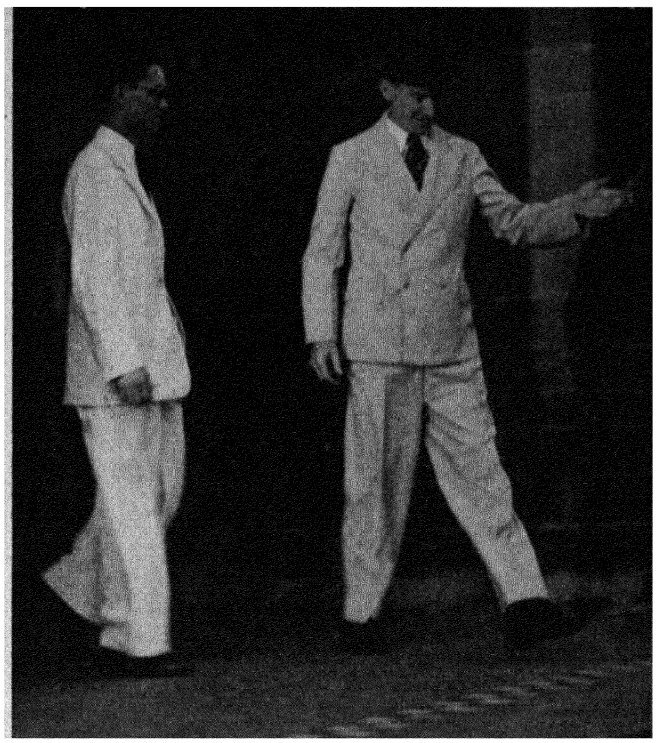
Recognition of the seriousness of the farm accident problem was indicated by the fact that 24 states had State Farm Safety committees in 1950, and 12 states had a full-time farm safety specialist, working through many public and private agencies to spread information on the ways and means of meeting the problem. The president of the United States, for the seventh successive year, proclaimed a National Farm Safety week in July 1950. More than a million pieces of educational material were distributed, and radio, newspaper and magazine support were outstanding.

The 1949 toll of deaths in home accidents was 31,000, about the same as that for motor vehicles. Reports for the first ten months of 1950 indicated that home fatalities were less numerous than in 1949. It appeared that the year's total might be less than 30,000.

During 1950 about 85 out of the several hundred local and state safety organizations throughout the country qualified for acceptance as chapters of the National Safety council, this relationship signifying that these organizations fully represented the National Safety council in the communities in which they operated, although at the same time retaining their own autonomy. The 38th National Safety congress was held in Chicago in Oct. 1950, with an attendance of approximately 12,000. In addition, about 30 regional safety conferences were held during the year. (R. L. Fo.)

ACHESON, DEAN GOODERHAM, U.S. statesman (b. Middletown, Connecticut, April 11, 1893), the son of an Englishman who became bishop of Connecticut, was educated at the Groton school, Connecticut, at Yale university and at the Harvard Law school. After serving in the navy in World War I he took up a legal career and in 1933 was under secretary of the treasury. In 1941 he became assistant secretary of state and was under secretary of state from Aug. 16, 1945, to June 30, 1947. On Jan. 7, 1949, President Harry S. Truman appointed him secretary of state.

During 1950 Acheson was perhaps the most controversial figure in U.S. public life and was the target of repeated attacks in congress, particularly by Senator Joseph McCarthy (*q.v.*), on the grounds that his far eastern policy had failed; President Truman repeatedly affirmed, however, that Acheson would not, as his critics were demanding, be asked to resign. On May 7 the secretary of state flew to Paris where he had discussions with the French foreign minister; two days later he went on to London for a ten-day visit during which he had extensive discussions with the British foreign minister and other Commonwealth and western European statesmen and was received by the King. He also presided over meetings of the Atlantic Treaty council. Among his social engagements during the stay were the Middle Temple Grand Day dinner on May 9 and a dinner given in his honour by the Pilgrims on May 10. In September he had further talks in New York with the British and French foreign ministers and attended further meetings of the Atlantic Treaty council. After the conferences between President Truman and Clement Attlee in Washington in December, the attacks on Acheson's foreign policy eased a little, when Thomas E. Dewey and other Republican leaders urged that the nation should unify in its stand against Communism.



King Phumiphon Adundet of Thailand (left) in Aden in March 1950. On right is the governor, Sir Reginald Champion.

ADEN. A British colony and protectorates and a free port on the southern coast of Arabia.

Colony. Area: 80 sq.mi. (incl. Perim island [5 sq.mi.], the strait of Bab el Mandeb and the five Kuria Muria islands off the Dhufar coast of Oman). Pop. (1946 census): 80,876 (Perim 360). Language: Arabic; Indian languages and Somali also spoken. Religion (1946): Moslem *c.* 90%, Jewish 5%. Administration: governor; executive council, *ex officio* members (3) and nominated members (in 1948, 3); Legislative Council, established 1947, 4 *ex officio* members and up to 12 nominated members (up to 4 official and 8 unofficial).

Protectorates. Western and eastern, the latter including the Hadhramaut and Socotra island (150 mi. E. from Cape Guardafui, pop. *c.* 5,000). Total protectorate area, 112,000 sq.mi.; total pop. (1947 est.) 650,000, almost entirely Moslem Arabs. Administration: indirect, by sultans with advice of political officers under the British agent. Premier chieftain (western), Fadl Abdul Karim, Sultan of Lahej; premier chieftain (eastern), Sir Salih bin Ghalib al Qu'aiti, Sultan of Shihr and Mukalla. Governor and c. in c. of the colony and governor of the protectorates, Sir Reginald S. Champion.

History. Since the end of World War II there had been a steady increase in shipping using the port and in 1950 an average of 360 vessels a month called; the demand for oil bunkering rose to about 3 million tons a year. This led to considerable improvement in the port and pilotage services and to the construction of more oil tanks ashore.

After recurrent border difficulties with the Yemeni a conference was held in London in September with Yemeni representatives. Agreed proposals were submitted by the delegates to their respective governments.

Development plans made for the colony covered the extension of medical and educational services, including female education, an Aden college and a technical institute: the institute was opened towards the end of the year. Two-thirds of a scheme costing £250,000 to irrigate 60,000 ac. for rice growing in the Abyan district of the protectorates was completed.

Trade. The principal local product exported is salt. The bulk of the trade is entrepôt with the interior of Arabia and neighbouring territories. Imports (1949) Rs. 328,953,002; exports (1949), incl. re-exports, Rs. 203,961,079.

Finance. Budget estimates 1950-51: revenue Rs. 128,036,859; expenditure Rs. 173,028,572. Currency: Indian rupee (Re. 1 = 1*s.* 6*d.*).

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ADULT EDUCATION. In 1950 good progress in mass education campaigns was reported from many British colonies and dependencies, such as the Anglo-Egyptian Sudan, the Gold Coast, Nigeria, Togoland, Uganda, Fiji and Sarawak, and from countries in eastern Europe.

Following up its 1949 international conference on adult education, held at Elsinore, Denmark, U.N.E.S.C.O. organized in July-August, at Mondsee, near Salzburg, Austria, a six weeks' international seminar which was attended by some 70 representatives of 22 nations. Four working groups studied respectively the organization and administration of adult education, the question of how the adult could be helped to think most effectively in today's complex world (with special reference to scientific developments), the relation of adult education to social, economic and political problems, and the educational use of leisure, with special reference to the arts.

In England, Birmingham's centre for continued studies, believed to be unique, reported a successful first year's work. The centre offered two types of short course: a general course at a higher intellectual level than most adult education; and specialist courses for university graduates. The courses attracted many oversea graduates studying in Britain. In October Ernest Green, a pioneer of the adult education movement, retired from the post of general secretary of the English Workers' Educational association.

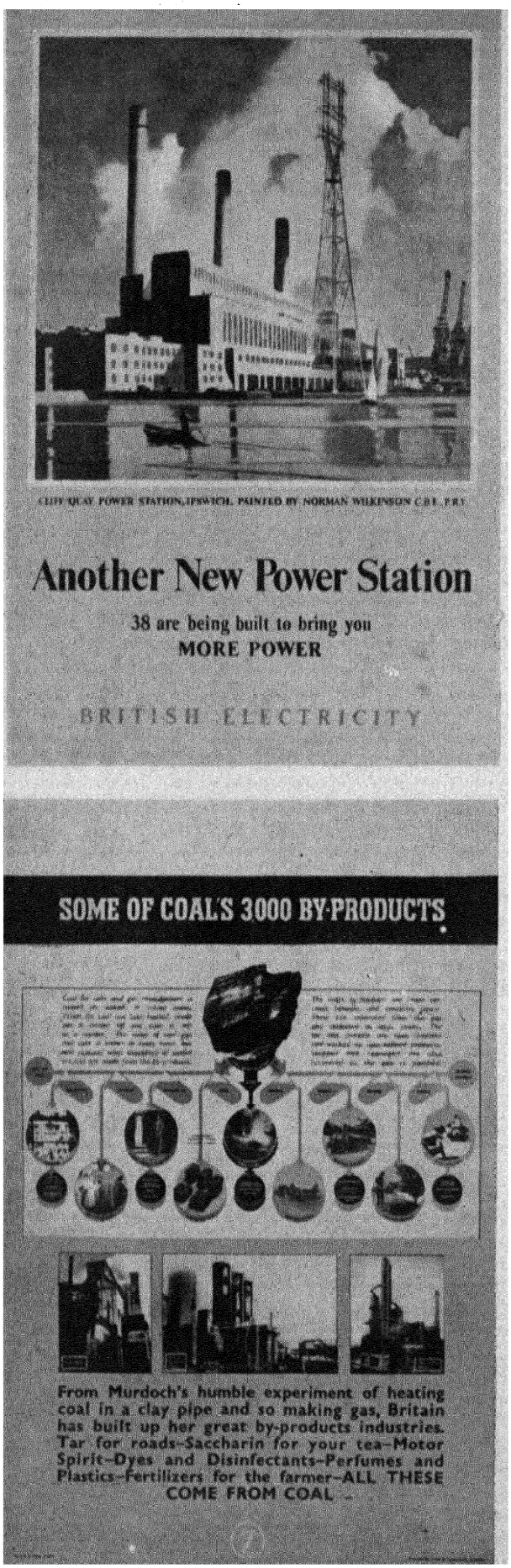
In August-September a committee appointed by the High Commission for the Federation of Malaya investigated the possibilities of extending adult education throughout the federated states.

The first annual report of the New Zealand National Council of Adult Education, set up under the Adult Education act, 1947, stated that the four regional councils established by the act had already become the chief adult educational agencies in the country.

The annual report of the Transvaal Workers' Educational association reported successful Afrikaans classes for immigrants and graded courses of general education in native townships.

In August it was reported from Poland that in 85 towns and 5,000 villages illiteracy had been eliminated, and from Rumania that 700,000 persons had learned to write during the previous 12 months. Yugoslavia reported " impressive progress " in its anti-illiteracy campaign among its national minorities. For its Turkish minority Yugoslavia opened in July at Bitolj a " People's university." (A Yugoslav People's university aimed to give the general public information about the latest achievements in science and the arts). In the same month Poland launched a scheme of residential People's universities designed to teach fundamental knowledge about Poland and to train young persons for professional and social work. Conditions of entry were that candidates must be children of landworkers or small peasants, at least 18 yr. old, and have completed seven years' elementary education.

In September Poland reorganized its general education schools for adult workers on two levels, elementary and secondary, to give to all the opportunity of secondary education. Over 50 correspondence schools, to serve 30,000 students, were established. In August, Yugoslavia reported that during the previous year over 7,000 shock workers and



Two posters issued in 1950 by the British Electricity authority and the National Coal board.

other experts had attended its general education schools. These schools ranked as junior secondary schools; from them workers could progress to workers' training or professional schools, and ultimately to universities. (H. C. D.)

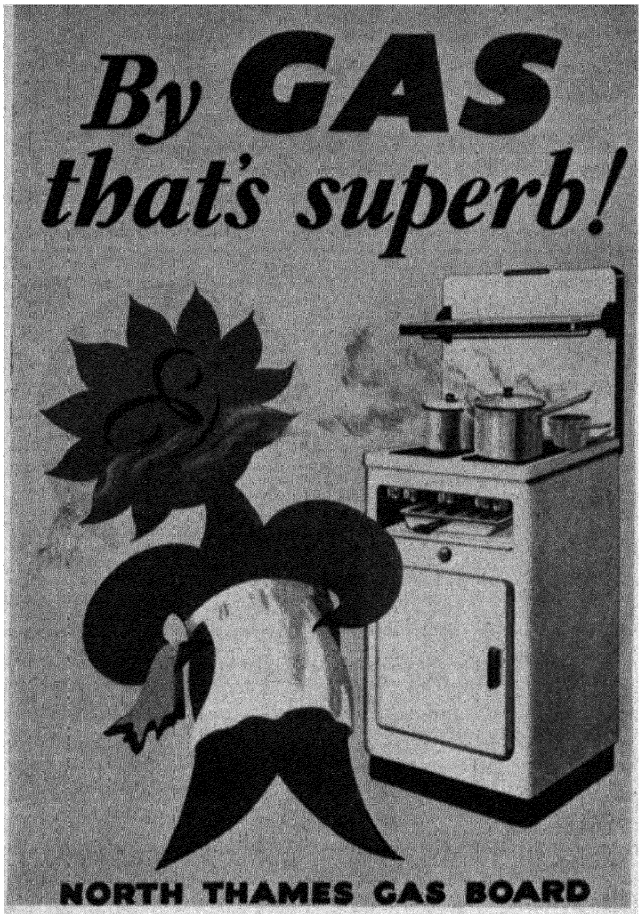
ADVERTISING. Although the two-year-old voluntary scheme for limiting advertising expenditure, agreed between the government and the Federation of British Industries, was allowed to lapse at the end of Feb. 1950, the year was one of disappointment and difficulty for British advertising. As paper became progressively dearer and, in the case of newspapers, more difficult to buy, publishers tried to recoup themselves by calling on advertisers to pay more for their space.

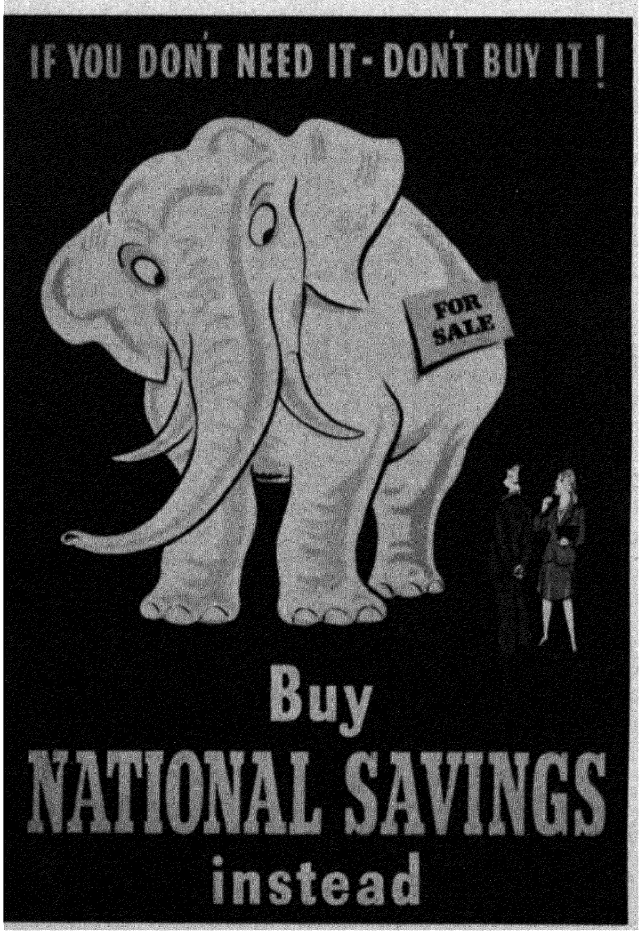
The *Statistical Review* calculated that the sum of £30,522,199 was spent on advertising in British newspapers, periodicals and magazines of all kinds during 1949, which was 40·15% above 1948. For the first six months of 1950 the figure was given as £18,441,862, which suggests that the 1950 total would exceed the 1949 peak. The *Statistical Review* estimated that the limit had been reached, however, and forecast that as newspapers were going back to a six-page basis in July, for a short period having produced alternate eight-page issues, "we shall no doubt encounter a sizeable fall in aggregate expenditure." The second half of 1950 was marked by a prolonged dispute in the London printing trade which interfered with the production of more than 100 newspapers and periodicals.

The advertising business continued to try to build up British sales abroad, particularly in the dollar areas. At the close of 1949 the government, through the Board of Trade's export guarantee department, had told exporters that where necessary they would be guaranteed against losses on market research and "extraordinary advertising and promotional expenses" incurred in the North American markets. Considerable changes were carried out within the British Export Trade Research organization, a non-profit-making body with predominately advertising connections set up by the industry in 1945 to assist British trade overseas. Roger Falk became B.E.T.R.O.'s first director general. One of his initial moves was to effect a strong link between B.E.T.R.O. and the Federation of British Industries whereby the former concentrated upon market research and at the same time shared F.B.I. facilities abroad. The arrangements resulted in savings for both bodies.

The British code of standards in relation to the advertising of medicines and treatments was strengthened, in a second edition, issued in 1950, to the extent that advertisers of medicines and treatments could no longer claim that their products possessed power to slim the human body, or even to keep it slim. In October the Joint Advertisement committee of the Newspaper Proprietors association and the Newspaper society issued a warning that no advertising would be accepted which claimed that a hair treatment was capable of preventing or eliminating baldness. Outdoor advertising continued to pass through a period of re-adjustment due to the operation of the Town and Country Planning acts. The trade's outdoor advertising committee contested an application by Winchester corporation, to have the whole of the Winchester area put under "special control." This would have empowered the Winchester authorities to ban advertising and signs from the streets at will. Following a public inquiry in Dec. 1949, the Ministry of Town and Country Planning issued a compromise ruling in June 1950 which allowed "special control" to be applied only in certain parts of Winchester.

A growing number of municipal transport undertakings





took steps to permit the sale of advertising space on their vehicles, and several large contracts, notably in Glasgow, Aberdeen and Liverpool, were signed between the local authorities and advertisement contractors. Contemplating the large revenues (£2,969,536 in 1949) earned by the British Transport commission through the letting of advertisement position on its vehicles and properties, some municipalities saw in advertising a means of offsetting mounting costs which might otherwise have to be met through increased fares or out of the rates.

The Advertising association pressed on with its plans for staging the International Advertising conference (Britain) 1951 to which it hoped to attract a large number of U.S., Commonwealth and European advertising representatives.

Civil estimates published in March 1950 gave details of cuts in Central Office of Information expenditure to be carried out during the year ending March 31, 1951. The press advertising appropriation, which totalled £867,000 in 1949-50, was reduced to £763,000; some £253,000 was allocated for poster advertising, as against £574,000 in the previous 12 months. All told, the estimate of the total amount of money required for C.O.I. advertising and promotional activities in 1950-51 was put at £3,038,310 compared with £3,934,739 in 1949-50

Commonwealth. In the third quarter of 1950 an historic advertising campaign, that for the Festival of Britain 1951, was launched, making its first appearance in the Australian press. It was followed by a similar drive in South African newspapers and magazines. The campaign was afterwards extended elsewhere in the Commonwealth.

In South Africa the government-operated South African Broadcasting corporation opened the first station in its "Springbok Radio" chain or "C" service. Like the British Broadcasting corporation the S.A.B.C. had not previously allowed air time on its two existing networks to be sold, but this new group of transmitters carried programmes sponsored and paid for by advertisers.

In Australia a plan to develop public goodwill towards advertising was initiated by the advertising agencies, advertisement media and advertisers working together. Purpose of the project was stated to be "to portray in simple terms what advertising does for the community and its benefits to the national economy."

Europe. Advertising artists from all the European countries in receipt of Marshall aid, including Great Britain, took part in a contest sponsored by the Economic Co-operation administration for posters illustrating "inter-European co-operation." There were 2,584 entrants and the first prize went to Reijn Dirksen, a 25-year-old Dutch commercial artist. Two of the 16 finalists were British. An exhibition of posters from Switzerland, where the standard of outdoor advertising was highly rated, was arranged by the Advertising Creative circle and opened by the Swiss Minister in London on March 6. In Paris, on Dec. 3, 1949, an International Federation of Advertising Clubs was established, founder members being the Club de la Publicité, Paris; Club de la Publicité, Brussels; and the Club van Veertig, Amsterdam.

Representatives of advertisers organizations from Belgium, Denmark, France and Sweden visited London in Oct. 1950, to attend the golden jubilee celebrations of the Incorporated Society of British Advertisers. The International Chamber of Commerce commission on advertising met in Paris on Oct. 20 when it was announced that 11 countries had adopted the I.C.C.'s code of standards governing advertising practise and that others were contemplating doing so. (A. J. Hy.)

United States. The year's advertising in the U.S. was marked by higher total expenditures than in 1949, by the

Two further examples of state advertising by the North Thames Gas board and the National Savings movement.

spectacular growth of television as a medium and by the effects of the mobilization economy into which the country was entering.

Total expenditure was approximately $5,700 million, an increase of $500 million over that of 1949, distributed among the various media as shown in the table.

U.S. ADVERTISING EXPENDITURE* (millions of dollars)

	1950	1949
Newspapers	2,059·0	1,905·0
Radio	658·0	633·8
Television	161·6	63·0
Magazines	517·0	492·5
Direct mail	838·7	755·6
Trade and business papers	248·0	248·1
Outdoor	140·7	131·0
Farm papers	22·1	20·5
Miscellaneous	1,039·6	952·7
Total	5,684·7	5,202·2

* Estimate by Robert Cohen, McCann Erickson, Inc.

Television. In 1950 manufacturers made about 7·5 million television sets (as against 3 million in 1949), and at the end of the year there were nearly 10 million sets in operation in the U.S. (as against 3·95 million at the end of 1949) and 107 television stations operating in 65 markets. There were about 2 million sets in metropolitan New York City alone, viewed by approximately 8 million persons. Advertisers in 1950 spent approximately $100 million on television time (about four times their expenditure in 1949) but were beset by soaring time and talent costs: television network charges were running well above radio network charges (*e.g.*, $20,630 a half-hour as against $16,600), though their total available audience was only one-quarter of radio's; a major effort would cost about $1·25 million.

Radio. Total gross revenue of radio advertising in 1950 was approximately $448 million, an increase of 5·4% over that of 1949. Network time-sales declined 3·3%, but this loss was offset by gains in spot and local radio advertising. Radio manufacturers produced 14 million sets, the gross dollar volume of $1,700 million being the highest in peacetime history. There were 2,230 stations on the air at the end of 1950, as against 2,087 at the end of 1949.

The Korean war stimulated radio listening and led to determined efforts to improve programmes; and aggressive selling helped to improve the industry's position. The Association of National Advertisers made a report on radio and television costs and called for substantial reductions in night radio rates because of the losses of that audience to television. Late in the year the National Broadcasting company asked its stations in television areas to make cuts of some 10% in their rates in view of the altered values.

Newspapers. Newspapers in 1950 enjoyed record advertising volume and circulation. The Bureau of Advertising of the American Newspaper Publishers' association estimated that national advertising in 1950 would be larger than the $445 million of 1949 and would constitute the third successive record-breaking year in this respect. Media Records estimates for the first ten months of the year showed that national advertising (general and automotive) was 9·9% greater than during the corresponding period of 1949. Circulation was stimulated by the Korean war news. Representative papers in large cities showed gains of from 6% to 15%.

The line rate for advertising in daily newspapers increased 50% in the period 1940-50, but the milline rate, or cost of reaching a reader, rose only slightly, according to a study by Kelly-Smith company: the average milline rate for all newspapers, Sunday papers excepted, was given as $3·32 in 1940 and $3·41 in 1950. There were general advertising-rate increases among newspapers, as among other printed media. The volume of rate increases by media was characterized by the Standard Rate and Data service as the heaviest in 25 years.

Magazines. The Magazine Advertising bureau predicted a national advertising volume of between $470 million and $475 million for 1950, as against $445 million in 1949. The first half of 1950 showed a total circulation of 146,579,475 for all general and farm magazines reporting to the A.B.C., 3 million more than the second half of 1949.

The Committee on Advertising of the United States Chamber of Commerce, in a survey among advertising managers of 46 national publications, found that 67% had raised advertising rates during the first three-quarters of the year by an average of 11%; that advertising linage was up an average of 15% for 61% of the respondents, down an average of 8% for 39%; and that no inroads from television were observed by 60%, but that 40% had noted the effects of television competition in securing new advertising accounts. Practically all reported increased circulation.

Other Media. A circulation of 18,000 million passengers was estimated for advertising in the 90,000 vehicles carrying car-cards. There were 80 transportation companies, about 75% of the business being done by a dozen of them. Greater use of fluorescent inks was noted in travelling displays on the outside of buses and trolley cars.

The volume of national outdoor advertising was somewhat more than $80 million, according to Outdoor Advertising, Inc.; that of local advertising was estimated at approximately a third of this figure. It was estimated that national advertising was divided as follows: automotive (automobiles, gasoline and oil, tyres and accessories) 38% of dollar volume; beverages (soft drinks, beer, wine, spirits) 29%; food 19%; other products (cigarettes, appliances, etc.) 14%. The dollar volume of direct mail advertising, according to estimates from the Direct Mail Advertising association, was $80,223,785 in October, an increase of 9% over September's volume and 0·5% above March's, the previous record. For the first ten months of 1950 the dollar volume was $726,357,050.

Industrial advertisers and agencies were thrown into some confusion by the Korean war. Many of them had just become organized for extensive advertising and selling campaigns following the mid-year recession in 1949, when the Korean crisis developed and with it a rush of orders for industrial goods. The National Industrial Advertisers association set in motion a project to evaluate inquiries and their proper follow-up and to make a thorough study of industrial catalogues. The National Machine Tool Builders association set up an advertising committee to promote the desirability of machine replacements.

Business publications raised advertising rates generally. A study of a group of 75 such increases showed that 12 were based upon gains in circulation, 31 upon higher publishing costs. (D. ST.; R. A. BN.)

AFGHANISTAN. Independent kingdom in the centre of Asia bounded N. by the U.S.S.R., W. by Iran, S. and S.E. by Pakistan and E. by China (Sinkiang). Area: *c.* 270,000 sq.mi. Pop. (no census ever taken, 1947 est.): 12 million. Races: Afghans or Pathans or Pashtuns 53%, Tajiks 36%, Uzbeks 6%, Hazarah 3%, others 2%. Language: Pashtu or Pakhtu, but Tajiks and Hazarah speak Persian. Religion: Moslem (Afghans are Sunni, others mainly Shia). Chief towns (pop. 1946 est.): Kabul (cap., 206,200); Kandahar (77,200); Herat (75,600); Mazar-i-Sharif (41,900). King, Mohammed Zahir Shah; prime minister (from May 1946), Shah Mahmud Khan, the king's uncle.

History. The year 1950 began auspiciously by the signature on Jan. 4 at New Delhi of a treaty of friendship with India. The treaty provided that each signatory should be able to establish trade agencies in the other's territory. It would last for five years in the first instance, and at the end of that period it would be terminable at six months' notice.



Jawaharlal Nehru, prime minister of India (centre), and Sardar Najibullah Khan, Afghan ambassador in New Delhi (right), signing a treaty of friendship in New Delhi on Jan. 4, 1950.

Unhappily this friendship with India did not find reflection in Afghanistan's relations with the closer neighbour Pakistan. This, to some extent, may have been due to the acuteness of Indo-Pakistani tension over Kashmir and the devaluation issue. However that might be, both in Karachi and in Kabul there were at times sharp expressions of suspicion. Pakistan felt that Afghanistan was too tolerant of the so-called independent " Pashtunistan " movement, which had for its aim the creation of a Pashtu-speaking enclave and therefore a new state to be carved out of what was now Pakistani territory. As this movement was in a sense a legacy of the former political dominance in the North-West Frontier Province of the Congress supporters known as Red Shirts in the days of British rule, it had its dangers as a source of controversy between Afghanistan and Pakistan. Both countries had reason to be chary of pushing differences to extremes. On each side of the Durand line, which was the border between them, were turbulent tribesmen of first-class fighting qualities, whose economic condition made raiding an occupation secondary only to agriculture. If their overlords were not on good terms opportunities for mischief were obvious. The result was charges on one side or the other of violations of the frontier. A special example arose in September, when disturbances were caused by an apparent invasion of Pakistan near the Bogra pass. The Afghan government promptly denied that the invaders had comprised Afghan troops. The prime minister of Pakistan, Liaquat Ali Khan, in disclosing that a protest had been sent to Kabul on what he described as the culminating incident in a number of minor frontier violations, declared that Pakistan was willing to discuss economic and cultural questions of common concern to the two countries. He nevertheless deprecated any action which might disturb the peace of the strategic frontier area.

With Egypt, Saudi Arabia and Persia, Afghanistan developed closer relations during the year, as was symbolized by state visits of King Zahir to Cairo, Riyadh and Tehran in March. Relations with the U.S.S.R. were naturally of much importance to Afghanistan. The conclusion in Moscow in July of a four-year trade agreement was taken as a favourable sign in that regard. As the guardians of the Hindu Kush and a potential Switzerland of Asia, Afghanistan might have to live dangerously, but its king and government appeared to preserve their equilibrium successfully. (E. HD.)

Education. (1948) Schools: primary 400, secondary 25, higher (*lycées*) 7; teachers' training colleges 2. University at Kabul with four faculties.

Agriculture. Main food crops are wheat, barley, rice, maize and fruit. Production ('000 metric tons, 1949): cotton 13·6; sugar beet (1949-50) 32; wool 8. Livestock ('000 head, Jan. 1948): cattle 3,000; sheep 14,000; goats 6,000; camels 350; horses 700.

Industry. Fuel and power: coal ('000 metric tons, 1949) 5·5. Raw materials (1949): chrome ore (metric tons) 907; salt (metric tons) 5,443; skins and hides (number) 7,250,000.

Foreign Trade. Principal imports (1949): textiles, china, petrol (4·5 million gal.) cement (18,100 metric tons), machinery, tea, coffee and cocoa. Principal exports (1949): opium, karakul skins ($22·6 million in 1948-49; $8·7 million in 1949-50) and carpets.

Communications. Roads (1949) 2,265 mi. Licensed motor vehicles (Dec. 1949): cars 630, commercial 3,650. Telephone subscribers (Jan. 1949) 3,899.

Finance and Banking. Revenue est. at 220 million afghani. Note circulation (April 1950) 800 million afghanis. Monetary unit: *afghani* with an exchange rate (Nov. 1950) £1 = Af. 47·65.

See Sir Kerr Fraser-Tytler, *Afghanistan* (London, 1950).

AGRICULTURE. In western Europe during 1950, agricultural policies continued to be determined largely by difficulties in balancing international payments. Devaluation of sterling and other currencies in Sept. 1949 helped to expand the market for western European manufactures in North America and in other ways to prevent further reduction of gold and dollar reserves, but the fundamental need to raise the productivity of western Europe remained. All countries planned that their farms as well as their mines and factories should continue to increase production. There were few changes in the agricultural programmes submitted to the Organization for European Economic Co-operation for the period to 1952-53.

In North America during 1950, European balance-of-payment problems were more clearly recognized as limiting export outlets for farm produce, and fears of surpluses after the end of Marshall aid tended to grow. Producers of wheat, cotton, tobacco, fruit, tinned and dried milk and dried eggs were particularly liable to suffer. But the continuation of Marshall aid, the revival of industrial production during the first part of the year to the high levels of 1948, and later the Korean fighting and the rearmament programme together allayed fears of serious price reductions. There remained, however, a strong underlying desire to free export outlets to Europe and elsewhere of the currency, quota

and tariff arrangements which restricted them. In the U.S. some farming groups had an even stronger desire to ensure that federal price policies and storage arrangements should maintain high prices and high incomes from farming. Such arrangements for potatoes, dried eggs, dried milk and butter proved to be costly but general economic conditions were such that existing price supports were not fully tested. Thus, though there were many discussions of postwar agricultural trends in western Europe and North America, and some growing doubts and fears amongst certain farming groups, no important changes were made to basic policies.

The year was more memorable for the changes it witnessed in attitudes to the agricultural development of Africa and Asia. The enthusiastic launching of the United Nations' Food and Agriculture organization, the east African groundnut scheme, and plans for India and southeast Asia had given way during 1948 and 1949 to many doubts and substantial criticisms. In Asia, these were largely removed during 1950 in consequence of the expansion of Communist-controlled areas and the growing menace to Indo-China, Siam and Burma, the major rice-exporting countries of the world.

A Commonwealth conference at Colombo resulted in a realistic study of six-year development programmes for the countries of southern Asia—but not including Burma or Indonesia. The conference arranged priorities within a programme that up to 1957 would cost some £1,900 million, of which the major portion would directly benefit agriculture. Part of this would be contributed from within Asian countries themselves by loans and tax revenues and part would be loans from the World bank, the Export-Import Bank of Washington and the United States technical assistance programme originally known as President Truman's " Point Four " programme. In addition, loans, interest-free credits, and gifts from western governments, particularly from the U.S., would be sought. The general aim was to prevent the continuing upsurge of human populations from further undermining living standards and curtailing economic progress.

In some parts of British tropical African territories the need for the rapid expansion of agricultural production was re-emphasized. Growing human populations, changing political ideas and demands for higher standards of living despite financial difficulties were the basic reasons. The costs and failures of the east African groundnut scheme also drew public attention to African problems. The postwar shortage of vegetable oils and the balance-of-payment problems of the sterling area were the initial reasons for this scheme, and at first it gained wide support. But the large capital investment required and the high overhead costs of producing in sparsely populated areas of Tanganyika with unreliable rainfall and many unsolved scientific problems soon became apparent. By Sept. 1950, a drastic curtailment and alteration of production plans had to be decided on. In place of the 450,000 ac. of crops first projected at Kongwa, only 12,000 ac. were to be cropped in 1951, 1952 and 1953. The remaining 80,000 ac. of the cleared area were to be used for cattle ranching. These changes and the public criticism that preceded them did not, however, prevent development in African agriculture elsewhere. Small trials of tractors and farm implements were begun in many areas. High prices for



Stooked corn under water in a field in Perthshire following the flooding of the river Isla in Sept. 1950.

farm produce and shortages of labour due to mining and industrial developments encouraged innovations by those responsible for native agricultural progress. The Colonial advisory council on agriculture, animal health and forestry published a survey of the problems involved.

In eastern Europe the principal development in agricultural policy was an acceleration of the collectivization of holdings in Poland and Czechoslovakia. Ambitious five-year plans were announced to increase livestock production by 66% in Poland and 86% in Czechoslovakia, the increase in Poland to make possible considerable exports. In the U.S.S.R. increases in the size of collective farms and further attempts to increase labour and machine efficiencies were planned. But in Yugoslavia, the resistance of peasant farmers brought a promise from Marshal Tito that they would no longer be placed under duress to join collective farms and that their needs would be as well attended to as were those of the existing collectives.

In the southern dominions the most noteworthy development was towards substantial further expansion of meat production. In Australia meat production would have to increase 34% by 1970 to keep pace with the expected increase in the population and to maintain exports. Transport facilities costing £5·5 million were projected to help the flow of cattle from northern Australia and further trials were made of the air transport of fresh carcases from outlying areas. In New Zealand a rapid expansion of pork production, partly at the expense of bacon, was proposed and won the general support of the dairy and meat boards. South African plans were curtailed by a sharp reduction of the maize crop there from 32 million bags in 1949 to 25 million in 1950, owing to drought.

Northern Hemisphere Harvests of 1949. Despite some reduction of wheat and rye acreages in favour of crops for feeding to livestock and despite severe drought in some areas, European production of wheat and rye was some 4·4 million metric tons greater in 1949 than in 1948 (Table I). North American production of these grains was finally estimated as 5·7 million metric tons less than in 1949. Most of this reduction was in the U.S. The reduction in the world total exports of wheat and flour was equal to 4·1 million metric tons but, taking into account the increase in domestic harvests, the net reduction in the total supplies of Europe was only some 1·3 million metric tons (2%). This caused no difficulty, because stocks were adequate and because, with increasing supplies of milk, meat and eggs, the consumption of bread grains tended to decline. Thus flour consumption which averaged so much as 100,800 tons a week in the United Kingdom during 1948, fell to 92,000 tons a week by spring 1950 and was 88,200 tons a week during the month of October. The minister of food was able, on Aug. 27, 1950, to lower the rate of flour extraction from wheat from 85% to 80%.

The 1949 European crop of coarse grains was also generally satisfactory as compared to the 1948 crop, though still 5 million metric tons (9%) less than the prewar average. Some countries, notably France and Spain, had shortages of hay and roots caused by severe droughts in the spring and summer of 1949. But net imports of coarse grains into Europe were some 0·6 million metric tons greater during 1949-50 than during 1948-49 (Table II). Total imports of feedingstuffs to the United Kingdom were greater during 1948-49 by some 0·6 million metric tons of grain equivalent, which more than compensated for a reduction in supplies of home-grown feedingstuffs for livestock, largely owing to smaller crops of roots and potatoes.

The North American coarse grain crop was, in all, some 13 million metric tons (10%) lighter than the exceptionally heavy crop of 1948, most of the decline occurring in the U.S.

TABLE I. PRODUCTION OF BREAD GRAINS AND COARSE GRAINS
(million metric tons)

	Prewar	1948	1949
Wheat and rye			
Europe	61·4	53·7	58·1
North America	27·8	47·6	41·9
South America	8·9	8·3	8·4
Asia	34·8	35·1	34·4
Near East	8·5	9·4	6·8
Africa	2·5	2·5	2·8
Australasia	4·4	5·4	6·0
Total*	148·3	162·0	158·4
Barley, oats and maize			
Europe	54·8	48·5	49·7
North America	78·5	131·3	118·1
South America	19·8	18·5	15·8
Asia	28·8	30·5	28·8
Near East	7·0	7·3	6·5
Africa	6·8	7·9	8·6
Australasia	0·8	1·1	1·3
Total*	196·5	245·1	228·8

* Excluding U.S.S.R.
SOURCE: F.A.O. *Monthly Bulletin of Statistics*, Aug. 1950.

In Canada, the end-of-July stocks of barley and oats were reduced by only 0·5 million metric tons to 2·1 million.

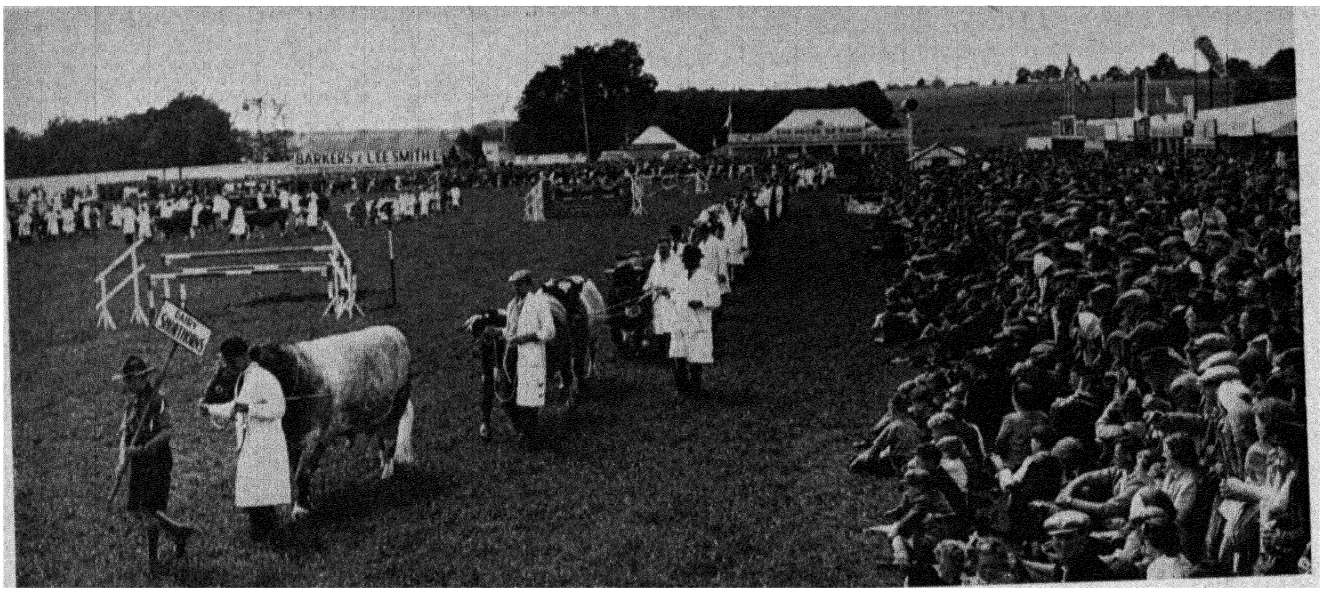
Thus both in Europe as a whole, and in North America, supplies of cereals for livestock feeding during the winter of 1949-50 were generally as adequate as those available during winter 1948-49, and despite difficulties in some countries owing to shortage of roughage feedingstuffs following 1949 droughts, livestock production continued to expand.

Livestock Production, 1949-50. Pig production responded rapidly. During the year ended in early summer 1950 the number of breeding sows and gilts was increased by 11% both in the United Kingdom and in Denmark, and by 10% in the Netherlands. These changes brought the numbers in the United Kingdom to 71% of their prewar average, but the comparable percentage for Denmark was 203, and for the Netherlands 125. Competition in the United Kingdom market for bacon was therefore growing, and greater attention was devoted to improving quality.

Egg production in Europe also increased, but only in the United Kingdom and Denmark was it estimated to be appreciably greater in 1950 than in prewar years. In North America and Australia by contrast egg production remained much greater than before the war, being 48% greater and still increasing slightly in Canada and 97% greater but declining in Australia.

The yields of winter milk during 1949-50 were raised substantially in western Europe. Sales of milk in the United Kingdom during the first four months of the year were 13% larger in 1950 than in 1949. In the Netherlands the comparable percentage was 15; in Denmark, about 19. The summer output of milk was greater in 1950 than in 1949 by some 5% in the United Kingdom, 9% in the Netherlands and 8% in Denmark. In Canada on the other hand, winter milk production was only slightly larger in 1949-50 than in 1948-49 and summer production was slightly smaller in 1950 than in 1949. In New Zealand, butter production in factories during the later part of the 1949-50 summer was reduced by 12% below the previous summer's production, but in Australia production was sustained.

Cattle numbers continued to increase in western Europe. In the United Kingdom, the number under one year old on June 4 was 4% greater in 1950 than in 1949 and 23% greater in 1950 than in 1939. Most of the increase since 1939 had been in cattle for milk production, but the output of fat cattle was rapidly increasing. During the year ended Nov. 1950, it was (by weight of carcases) 22% greater than during the previous year, and 2% greater than the annual output of the late 1930s. The total world production of all meats in 1950 was estimated as somewhat greater than the 1949 production, which had been slightly more than prewar production. But total supplies of meat per head of population



Cattle being paraded in the main ring at the Great Yorkshire show at Malton, July 1950.

were still about 5% below prewar supplies, with greater reductions in the United Kingdom and most European countries as against substantial increases in North America and the Argentine, and slight increases in Australia and New Zealand.

Harvests in 1950. The area sown to bread grains in Europe was some 3% greater in 1950 than in 1949, but still some 7% smaller in 1950 than in the late 1930s. Yields were, on the whole, satisfactory and total production was 3% greater than in 1949; but it was also 3% smaller than in prewar years. France and Yugoslavia suffered substantial reductions as a result of weather conditions. The United Kingdom had a wheat crop estimated as 15% greater than that of 1949, and 48% greater than the average prewar crop. But harvesting conditions were exceptionally difficult. In the republic of Ireland bread rationing had to be re-imposed.

In Canada, the acreage was only slightly reduced and with favourable weather during most of the growing season, production was 34% greater than in 1949. At harvest the weather deteriorated badly, making the proportion of low quality grain exceptionally high. In Australia, the wheat crop was approximately equal to that of the late 1930s, but 19% less than the large crop of 1949. The South American crop of wheat was some 4% larger than that of 1949 and some 3% larger than the prewar average.

The harvest of coarse grains in Europe as a whole was only slightly less than in 1949, but the United Kingdom harvest was much damaged by continuous rain and official estimates suggested a reduction in out-turn by some 0·9 million metric tons (19%). Shortages of feedingstuffs became serious in the west and southwest of the country. Hay was imported from Norway. Unfavourable weather reduced the coarse grain harvest of Danubian countries by fully 7%, including a very serious reduction in the Yugoslav maize crop, threatening famine conditions in some localities. Denmark and the Netherlands also had smaller coarse grain crops.

TABLE II. NET EXPORTS (—) AND IMPORTS (+) OF BREAD GRAINS AND COARSE GRAINS

(million metric tons)

	Prewar	1948-49	1949-50
Wheat and rye			
Europe	+9·5	+17·1	+11·4
North America	—5·4	—19·8	—14·5
Latin America	—1·8	+0·4	0
Far East	+1·0	+5·1	+4·6
Near East	0	+1·1	+1·1
Africa	—0·1	+0·7	+0·3
Australasia	—2·7	—3·1	—2·9
Barley, oats and maize			
Europe	+9·5	+5·9	+6·5
North America	—0.2	—3·3	—3·1
Latin America	—7·4	—2·2	—1·5
Far East	—0·7	+0·8	+0·8
Near East	+0·4	—0·2	+0·4
Africa	—0·7	—0·6	—0·8
Australasia	—0·1	—0·6	—0·4

SOURCE: F.A.O. *Monthly Bulletin of Statistics*, Aug. 1950.

The effects of these changes were aggravated by the shortage of Argentine maize as a result of the partial failure of the crop harvested in March and April 1950. Exports of maize from Argentina fell to a very low level. Fortunately, North American harvests of coarse grain were favourable and exportable supplies were adequate to meet, during the period to autumn 1951, any demand likely to be backed by the necessary dollars. Fortunately also, the effects of the wet summer on the grain harvest of the British Isles was in part offset by good yields from pastures, and root and green fodder crops.

Agricultural Production and Marketing Plans. Some noteworthy alterations were made in administrative arrangements in prices and in supplies of requisites. In the United Kingdom the slogan for the last half of the five-year programme was "Plough for Plenty." The tillage area, which was 8·8 million ac. in 1939 and 14·5 million ac. in 1945, had fallen to 12·9 million ac. in 1947 and 12·6 million ac. in 1949. It was expanded to only 12·7 million ac. in 1950 but the announced objective was 14·6 million ac. by 1952. The annual review of agricultural prices in the United Kingdom was complicated by the withdrawal of the subsidies (£43 million a year) on feedingstuffs and fertilizers, by the government's intention to reduce subsidies on foodstuffs from £440 million in the financial year to April 1950 to £410 million, despite the underlying tendency of prices to rise, and by the high level of the net farm income during 1949 (£283 million against £258 million in 1948 and £60 million in 1938). The agreed settlement was expected to reduce the net farm income to very nearly the minimum that the leaders of the farmers' unions stipulated was essential for achievement of the production programme. But this level was not published. Retail prices of food were raised 3·4% between February and November.

In Ireland progress was made in the land reclamation project, the biggest of its kind in Europe.

Steps needed to secure adequate feedingstuffs for livestock expansion programmes were much discussed in western Europe. In Denmark, the Agricultural Organization society published a comprehensive plan, entailing more capital for buildings and equipment and aiming at larger acreages of high yielding root crops, more silage, pasture improvement, better alfalfa, greater use of artificial fertilizers, fuller control of weeds and higher conversion efficiency in individual livestock enterprises. If these changes were fully carried out, imports of feedingstuffs by 1952-53 would not need to be much more than one-fifth of what they were before World War II, despite a projected increase in livestock production by 10%.

Nitrogenous, phosphatic and potassic fertilizers were all available in greater quantity for 1950 crops, both in the British Isles and in continental Europe (Table III). India, Japan and Egypt markedly increased their use of nitrogenous types, and Japan had more phosphates. The progress of agricultural mechanization continued in most western countries under the stimulus of high prices for farm products and difficulties in securing sufficient labour, but international trade in tractors and farm machinery tended to decline. This was partly because of further revival of domestic production in western Europe. In France, 17,100 tractors were produced during 1949, against only 1,700 during 1938.

Marketing of farm produce received greater attention in many countries. In the United Kingdom, under the agricultural marketing acts, schemes for wool and tomatoes and cucumbers were approved; and others for apples and pears, dried peas and horticultural seeds were in various stages of preparation. The Milk Marketing board urged restoration of its prewar powers of control over the utilization of milk but the Ministry of Food, with an eye to international balance-of-payment problems and food rations, continued to determine the proportions of supplies used for each type of manufactured product.

The first year's operations under the International Wheat agreement ended in July. Prices in the free markets remained above the maximum agreed export prices throughout the period, because of the prevailing need of the importing countries to buy as much as possible in the soft currency areas and because the U.S. decided to sell only at the maximum prices, though this resulted in less than the full U.S. quota being exported. Total transactions under the agreement were equivalent to 90% of the minimum agreed exports and imports and to 53% of the total world trade in wheat and flour.

Wool, rubber and coffee prices rose to new high levels, but no multilateral agreements for their control could be achieved. The International Federation of Agricultural Producers began to explore the possibilities of agreements to sustain prices of dairy products.

In the field of agricultural education the Asian training centre for agricultural and allied development projects deserves mention. It was sponsored jointly by the government of Pakistan, the United Nations' Food and Agriculture organization, the International bank and the Economic Commission for Asia and the Far East. Men from many countries received four months' practical training.

Research and Technical Development. Among the multitude of research studies being carried on in the natural sciences affecting agriculture, special interest attached to the following: the indirect and delayed effects of the herbicides and insecticides developed during and after the war, and their toxicity for man; the physiology of artificially induced polyploid plants; the conditioning of seeds and tubers for early maturity; responses of crops and stock to the correction of deficiencies of "trace" elements; the possibilities of artificial pollination of fruit trees; control of the biennial bearing of fruit trees; the physiology of "letting down" milk. In agricultural economics the most interesting developments were in studies of mechanization, and of the relations between agriculture and industry under conditions of full employment. (J. R. RA.)

TABLE III. CONSUMPTION OF ARTIFICIAL FERTILIZERS
(thousand metric tons)

[June-July] Year	British Isles	Europe*	Canada and U.S.†	India	Japan	Other‡
Nitrogen						
1948-49	195	1,299	947	49	300	333
1949-50	204	1,421	968	114	411	428
1950-51||	214	1,658	994	113	406	502
Phosphoric acid§						
1948-49	420	1,855	1,872	5	165	736
1949-50	461	1,923	1,845	11	221	802
1950-51	486	2,114	1,881	16	250	901
Potash						
1948-49	210	1,813	986	1	164	107
1949-50	219	2,289	958	1	116	119
1950-51||	231	2,421	1,003	1	120	135

* Excluding British Isles. † Including U.S. possessions. ‡ Excluding U.S.S.R. and China. § Excluding rock phosphates. || Forecast.

SOURCE: F.A.O. Commodity report: *Fertilizers*, No. 1. Aug. 1950.

United States. *Crop Production.* The crops of the eight principal grains in 1949 produced a total tonnage of 158·4 million. The record was 180·5 million short tons in 1948. Food grains constituted 33·5 million tons of the total, the smallest in seven years but larger than any total before 1944. The 1950 tonnage included the smallest buckwheat crop on record. The feed grain total of 125 million tons, which included the largest grain sorghum crop on record, was slightly less than in 1949 and showed a significant decline from the 138 million tons of 1948. A large hay crop, together with an average carry-over, provided the most abundant hay supply per animal on record.

The oilseed crop of 1950, amounting to 14·7 million tons, was only 6% below the record of 1949. Soya beans, a record crop, made up well over half the total. There was a record sugar-beet tonnage.

Corn was planted later than usual, as a result of a late cool wet spring in the main commercial area; largely because of official acreage allocation, the harvested acreage was the lowest since 1894. The late start, a cool summer, considerable but not extraordinary cornborer damage and local frosts as early as August resulted in a yield of 37·6 bu. per acre (38·8 in 1949) and in more being used for ensilage than usual.

In accordance with official acreage allocations, the planted acreage of wheat was reduced by about 16% compared with 1949; seeding conditions were generally favourable in the southern plains but later drought and green-bug damage led to the abandonment of more than nine million ac.—in Texas 53% of the seeded acreage was not harvested. The cold wet spring of the northern plains was followed by nearly ideal conditions except for some early frost. As a result, storage was abundantly available for the crop. It was indicated that total domestic consumption of the crop and large carry-over would not be much more than 225 million bu. Exports, which in 1948-49 reached the unprecedented level of 503 million bu., were expected to be about 265 million bu. Thus, the carry-over at the end of the crop year, July 1, 1951, was expected to be about 450 million bu. The preliminary survey in December of the 1951 winter wheat crop suggested that sown acreage was about 6% more than had been requested, and that the crop was in good condition except for need of surface moisture and snow cover, especially in the southern plains.

The cotton crop of 9,884,000 bales was one of the smallest for 50 years grown on the smallest harvested acreage since 1884. Allocation of about 21 million ac., as compared with

27·23 million ac. harvested in 1949, together with unfavourable weather and heavy boll-weevil damage, combined to relieve the Commodity Credit corporation of its large surplus stocks, push prices to new high levels and institute export controls and caused the government to remove all restrictions on cotton acreage in 1951.

A crop of 439·5 million bu. of white or Irish potatoes was produced, compared with the record 454·7 million bu. in 1948, even though the harvested acreage was the smallest since 1874 and the subsidized price was set at 60% of parity instead of 90% as in 1949. Nevertheless, the crop was about 100 million bu. more than national requirements. The average yield of 237·9 bu. per acre was a new record, and Maine again had a new record yield of 475 bu. per ac. (*see* Table IV).

Livestock Production. All cattle at the beginning of the year totalled 80,277,000 head, compared with 78,298,000 head a year earlier and 85·6 million head at the peak in 1945, but approximately 12 million head more than before World War II. Of that total, 24,625,000 head were milch cows, against 24,416,000 a year before. Slaughter of a slightly larger number of beef animals at heavier weights than in 1949 provided an estimated 10,873 million lb. of beef and veal, compared with 10,770 million lb. in 1949 and about 8,000 million lb. prewar. It was anticipated that the number of beef cattle slaughtered in 1951 would be somewhat larger even though fewer feeder cattle were placed in corn beef feed lots in the autumn of 1950 than in 1949.

There were 60,424,000 pigs on U.S. farms at the beginning of the year, an increase from 57,128,000 head in 1949 but much less than the 83·7 million head at the peak in 1944. The major spring pig crop was 59,997,000 head, much more than the 55,191,000 head of a year earlier, and the autumn pig crop was estimated at 40,657,000 head, as compared with 37,175,000 head a year before. Slaughter during the year produced 10,939 million lb. of pork, against 10,333 million lb. in the previous year. At the end of the year it was estimated that pork production in 1951 might be about 11,700 million lb., a result of the increased autumn pig crop of 1950 and an estimated expansion to 63·5 million head in the spring crop of 1951.

Livestock prices in 1950 followed divergent trends. Pig prices were at least $2 or $3 per cwt. higher than in 1949 and ended the year at more than $20 per cwt. Fat beef cattle were generally lower in price than in 1949, whereas feeder animals were considerably higher, thus narrowing the spread and increasing the risk to those farmers engaged in finishing high-grade beef. Late in the year the price of best grade of fat beef cattle was nearing $40 per cwt. Grain-fed lambs, late in the year, rose to a record price of just under $33 per cwt. Pig prices were not subsidized by the government after March. The 1950 chicken and turkey crop was not subsidized.

Sheep on U.S. farms at the beginning of the year, 30,797,000 head, were the smallest number in the period during which records had been kept, having declined from 31,654,000 head at the beginning of 1949 and more than 50 million head prewar. Consequently, the lamb crop of 1950 was a record small one of 18,431,000 head; slaughter during 1950 provided only an estimated 608 million lb. of lamb and mutton, about the same as in the previous year. It was anticipated that the decline in sheep numbers would probably halt in 1950.

The 24,625,000 milch cows on U.S. farms at the beginning of 1950 represented an increase from 24,416,000 head in 1949 and a further increase took place during 1950, although the total remained far short of the previous peak of 27,770,000 head in Jan. 1945. As a result of very heavy feeding and the uncommonly fine pastures of 1950, milk production per cow reached record levels, and total production for the year was about 120,500 million lb., as compared with 119,136 million lb. in 1949.

TABLE IV. U.S. CROP PRODUCTION

	1950		1949	
	Yield per ac.	*Production ('000)*	*Yield per ac.*	*Production ('000)*
Field Crops				
Corn, bu.	37·6	3,131,009	38·8	3,379,436
Wheat, bu.	16·6	1,026,755	14·9	1,141,188
Oats, bu..	34·9	1,465,134	32·9	1,329,473
Barley, bu.	26·9	301,009	24·0	236,737
Rye, bu.	12·6	22,977	12·0	18,739
Flaxseed, bu.	10·1	39,263	18·6	43,946
Rice, bags (yield in lb.)	2,361·0	37,971	2,215·0	40,747
Hay, all, tons	1·41	106,819	1·36	99,536
Beans, bags (yield in lb.)	1,128·0	16,843	1,163·0	21,377
Soya beans, bu.	21·6	287,010	22·7	230,897
Peanuts, lb.	881·0	2,038,425	804·0	1,875,825
Potatoes, bu.	237·9	439,500	215·2	411,565
Sweet potatoes, bu.	104·4	58,729	100·5	55,368
Tobacco, lb.	1,277·0	2,035,915	1,209·0	1,972,359
Sugar beets, tons	14·3	13,383	14·8	10,197
Cotton, bales (yield in lb.)	265·4	9,884	284·0	16,128
Fruit Crops				
Apples, bu.		120,499		133,742
Peaches, bu.		52,573		74,818
Pears, bu.		31,263		36,404
Grapes, tons		2,641		2,662
Oranges, boxes		111,290		108,535
Grapefruit, boxes		48,520		36,500

Poultry output during 1950 was 180% of 1935-39, whereas 1949 had been 169%. At the beginning of the year there were 481,190,000 hens, compared with 448,676,000 head a year before. Chickens raised in 1950 amounted to only 670 million head, as compared with 744 million in the previous year. Commercial broilers (540 million head) were 10% more numerous than in 1949. Turkey production was at a record high level.

The number of horses continued to decline. There were 5,310,000 head on farms, against 5,898,000 head in 1949. Mules totalled 2,153,000 head, as compared with 2,348,000 head in the previous year.

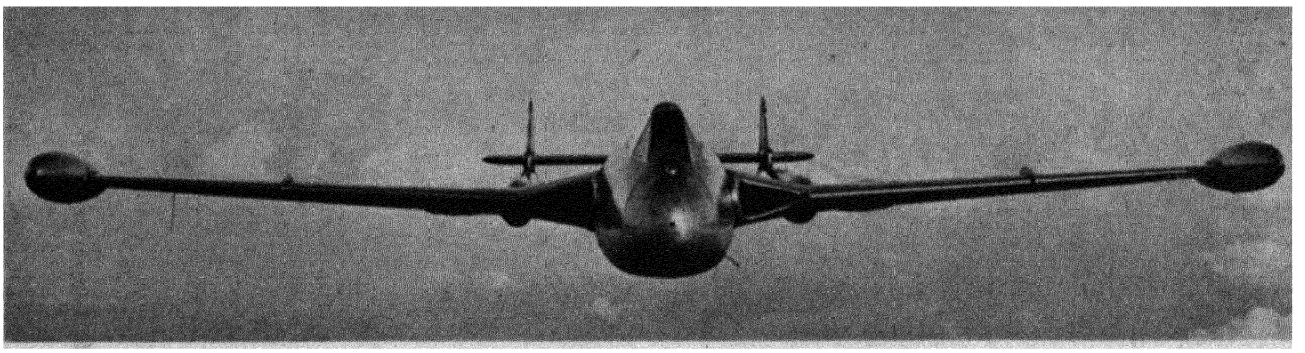
Food Stocks and Exports. Food exports by the U.S. in 1949-50, mostly to Economic Co-operation administration countries or occupied areas, amounted to only 34,863 million lb., as compared with 49,072 million lb. in 1948-49. This export accounted for 11·7% of the total U.S. food supply in 1949-50. Wheat in some form made up more than half the total. Other grains accounted for about a quarter.

Farm Labour. There was an average of 10,676,000 workers in the period Jan.-Nov. 1950, as compared with 11,084,000 in the previous year. The average farm worker received $102 a month with board and room or, if employed by the day, $4·50. (*See* also BEEKEEPING; COCOA; COFFEE; DAIRY FARMING; FERTILIZERS; FOOD SUPPLY OF THE WORLD; FORAGE CROPS; FRUIT; GRAIN CROPS; HOPS; LIVESTOCK; NUTS; POULTRY; ROOT CROPS; SOIL CONSERVATION; SPICES; SUGAR; TEA; VEGETABLE OILS AND ANIMAL FATS; VEGETABLES; WHEAT; WOOL.) (J. K. R.)

AIRCRAFT MANUFACTURE. During 1950 Great Britain retained its lead in the field of jet propulsion, and a number of interesting new types made their appearance. Overseas sales were maintained at a satisfactory level: exports of aircraft and aviation material averaged slightly less than £3 million a month.

At the annual display of the Society of British Aircraft Constructors in September, 28 of a total of 58 aircraft were powered by turbo-jet or turbo-prop engines; 35 were military types; and 30 aircraft were shown for the first time. Nevertheless the keynote of the year was one of consolidation after the sensational strides of 1949.

On the military side a new Hawker fighter, the P.1081, showed improved performance over the P.1052 of 1949, which it resembled. It seemed probable that the Nene with



The de Havilland 112 Venom fighter, powered by a D.H. Ghost jet engine.

which it was powered would be only interim equipment during trial and that it would go into production with the Rolls-Royce Tay or Avon. Another experimental fighter, the Supermarine type 535, also powered by a Rolls-Royce Nene, made its first flight in August and was subsequently demonstrated at Farnborough in early September. Fitted with an after-burner, the 535 probably exceeded the speed of sound in level flight at altitude.

The English Electric company's Canberra, the United Kingdom's first jet-engined bomber, demonstrated in 1949, was slightly modified and put into production for the R.A.F. in 1950. Though it was capable of carrying a satisfactory bomb-load, its speed and manoeuvrability fitted it potentially for a number of other roles, in much the same way as the De Havilland Mosquito became the maid-of-all-work in the later stages of World War II.

Another interesting development during the year was the appearance of no less than three anti-submarine aircraft, designed by different constructors but all powered by means of Armstrong-Siddeley Mamba turbo-prop engines. The two co-axial airscrews allowed the pilot to stop one for economical cruising and to start it up again immediately when full power was required.

The Brabazon I continued experimental flying with its eight Bristol Centaurus engines: at London airport and at Farnborough, where it took off in 1,400 yd. and landed in 1,200 yd., it demonstrated that it could be used much more widely than had been originally supposed. The construction of the Brabazon II, powered by eight Bristol Proteus turbo-prop engines coupled in pairs, made good progress; and the aircraft was expected to fly in 1952. The Proteus engines were extensively flight-tested, using a Lincoln bomber as a flying test-bed.

The De Havilland Comet demonstrated its capabilities during its first year by making record flights in Europe and Africa and by completing over 300 hr. of flying. The second prototype was flying by the middle of 1950; and it was hoped that the first of a production-order for British Overseas Airways corporation would be ready for flying in early 1951. The Vickers Viscount, which was to go into service with British European Airways, gained the distinction of being the first jet aircraft to operate on a regular airline: the prototype, with four Rolls-Royce Dart turbo-prop engines, flew during the summer on B.E.A.'s normal London-Paris and London-Edinburgh routes.

The Armstrong-Siddeley Sapphire engine, believed to be the most powerful aero-engine in the world (giving 7,200 lb. static thrust), was demonstrated for the first time in September, two being mounted in a Gloster Meteor as a flying test-bed.

The Korean war and the consequent decision on rearmament by the western nations emphasized the need for increased production of military types of aircraft. However, within the existing constructional capacity of the British aircraft industry, there was already a preponderance on the military side; and up to the end of 1950 there was no sign of any official restriction on the carrying-out of contracts for the supply of civil aircraft.

United States. The value of a strong merchant air fleet as a military asset was emphasized by the action of the United States government early in the Korean war in requisitioning civil aircraft for use as transports. This was followed up by considerable military orders for transport aircraft (including a number of the lengthened Super-Constellations from the Lockheed Aircraft corporation, for naval use).

The year 1950 saw some interesting developments in the field of military aircraft. The Thunderjet's successor, the YF-96 with swept-back wings, was powered by a new edition of the Allison J-35 turbo-jet engine which showed a 38·5% improvement on the original J-35 which appeared in 1947. Another swept-back wing experimental aircraft, the Martin XB-51 ground-support bomber, had also great possibilities with its three General Electric J-47 jet engines. Westinghouse's J-34, an 11-stage axial-flow turbo-jet, developing 3,200 lb. thrust at take-off, was certified for commercial use; and the Northrop Turbodyne XT-47, claimed to be the most powerful turbo-prop aero-engine in existence, was developed especially to power future military types of aircraft. Pratt and Whitney continued work on their new PT-2 turbo-prop engine, which was installed in a Boeing B-17 for air test; it was said that the PT-2 developed about 6,000 h.p. In October it was announced that the Curtiss Wright corporation had purchased the licence to build the Armstrong-Siddeley Sapphire as well as the same firm's Python and Double Mamba airscrew turbine engines.

The trend in civil aircraft construction was towards a stopgap programme to convert existing airline power plants from piston engines to jets, though some airlines took a conservative view and ordered some of the new Super-Constellations similar to those being turned out for the navy.

Boeings announced provisional plans to replace the existing engines in the B-377 Stratocruiser and its military counterpart with turbo-prop engines. They were also said to be considering the addition of two auxiliary turbo-jets to the Pratt and Whitney R-4360s to increase the speed and take-off weight of the Stratocruiser.

In the Super-Constellations, Eastern Airlines proposed in 1950 to replace the piston engines, with which they would be originally equipped, with improved Allison T-38 turbo-prop engines after a year or two's operation. This was expected to increase the speed of the aircraft to 400 m.p.h.

A similar re-equipment with Allison T-38 engines was being considered by the Douglas Aircraft company and Martin's for the DC-6 and the 4-0-4 respectively.

Meanwhile Congress authorized the expenditure of $12·5 million on the development of gas-turbine transport aircraft, including the testing of prototypes and the conduct of experimental transport operations. Most of the big

constructors were working on projects for jet airliners, but none appeared during 1950.

Canada and Australia Late in the year the Canadian defence minister announced the increase of the order for North American F-86 sabre fighters to " several hundreds," to be built under licence in Montreal by Canadair. Meanwhile, A. V. Roe (Canada) continued the tests of its Orenda direct-entry axial-flow turbine with good results; it was intended to power the Avro CF.100 fighter aircraft with it. Canadian Pacific Airlines ordered two De Havilland Comets for delivery in 1952-53 for their north Pacific route. Meanwhile development of the Avro Jetliner went on satisfactorily.

Teams of technicians from the Australian government factory and the Commonwealth Aircraft corporation visited the United Kingdom to draw up plans for the production of the Canberra jet bomber and the Hawker P.1081 four-cannon fighter. In Australia the Commonwealth Aircraft corporation prepared to build the Rolls-Royce Avon axial-flow jet engine. The first production-models of the feeder-line three-engined D.H.A. Drover were delivered to the air lines during the autumn.

Western Europe. In France the year 1950 did not see very much new progress, though development continued on the S.N.C.A.S.E. Armagnac four-engined transport and the S.N.C.A.S.O. twin-engined Bretagne. On the military side, the Dessault 450 Ouragan went into production, powered by Nene engines built under licence by Hispano-Suiza. But perhaps the most interesting French contribution was the O.10 Leduc aircraft powered by an " athodyd " or ram-jet engine.

Both Fokker in the Netherlands and Fiat in Italy were working on designs for jet-engined trainers; and in France, Switzerland, Belgium, the Netherlands and Italy arrangements were made for the production of British jet fighter airframes and engines under licence. (*See* also JET PROPULSION AND GAS TURBINES.) (D. CR.)

AIR FORCES OF THE WORLD. In 1950 the world's air forces, both eastern and western, continued with the intensive development of advanced types of aircraft. The events of the summer, however, tended to shift the emphasis in all countries toward production. The rate of expansion came under security restrictions on both sides of the " iron curtain." Little was made known by governments about quantities of aircraft or the results of advanced research, but aircraft with and without pilots were undoubtedly improving in performance, and guided missiles could be assumed to be a major field for research in the larger nations. There was a strong trend toward the modification of existing types of military aircraft for tactical uses. Standardization of types of aircraft for a United Nations air force, while by no means fully achieved, appeared to be on the way.

Great Britain. Aircraft and engine production became a problem of first importance during 1950 as plans for the defence of the Commonwealth and the North Atlantic treaty nations took form. Production began to increase in July, and in November Clement Attlee, the prime minister, announced that orders for aircraft for the first two years of a three-year defence plan had been placed.

Farnborough Display. The display at Farnborough of the Society of British Aircraft Constructors, held in Sept. 1950, again showed excellent results of intensive research and development on gas turbine-powered tactical, defence and transport aircraft. New bombers in the medium and heavy classes were again lacking, and heavy bombers above 150,000-lb. loaded weight were not planned, though some projects in the 150,000-lb. medium class and lighter were reported to be progressing toward the prototype stage. Vickers-Armstrongs, Ltd., were said to be leading in the medium jet bomber field,



Three helicopters taking part in demonstration flights at the Royal Air Force display at Farnborough, Hampshire, June 1950.

and others reported in progress were the Handley Page tail-less jet bomber and a Bristol light jet bomber. Delivery of new jet bombers by the middle of 1951 was expected at the end of 1950.

Night fighters shown included the Gloster Meteor N.F.2, the English Electric Canberra 2 and the de Havilland Venom N.F.2, all of which had been ordered in quantity. The Venom N.F.2 was a carrier-borne fighter having a crew of two, designed for both all-weather and night-fighter duties. The Canberra 2, with its two Rolls-Royce Avon turbo-jets, impressed observers with its performance as its predecessor had in 1949, and was scheduled for light bombing and ground attack as well as night-fighter duty. In addition to English Electric, Handley Page, Short and Harland, and A. V. Roe were manufacturing this aeroplane.

Transition of the Royal Navy to jet-powered equipment was well begun in 1950 with quantity orders for the Vickers Supermarine Attacker and the Hawker Sea Hawk jet fighters, and the Westland Wyvern turbine-propeller fighter. New anti-submarine types shown at Farnborough included the Blackburn and General Y.B.1 and the Fairey 17, both powered by coupled Armstrong Siddeley Mamba turbine-propeller engines, and the Short and Harland SB.3, powered by two Mambas. The SB.3 was a version of the Sturgeon reconnaissance bomber and naval target tower, with an underslung nose for radar equipment.

Experimental Aircraft. Experimental types at Farnborough included the Avro 707B delta-wing research plane, a second version of the 707 shown in 1949. Six 707Bs were reported to have been ordered. This was the first of a planned research series intended to investigate the delta wing at all speeds for its suitability as a bomber wing. The Nene-powered Boulton Paul P.111, not shown at Farnborough, was first flown in October. It was designed for transonic speeds. The third in this planned series would be the high-speed Fairey delta wing, possibly with a rocket engine.

Other British experimental aircraft in various design stages,

besides the jet bombers already mentioned, were Fairey and Gloster jets, a de Havilland twin-jet and the de Havilland Comet with axial jets. (*See* also AIRCRAFT MANUFACTURE; JET PROPULSION AND GAS TURBINES; ROYAL AIR FORCE.)

Canada. The Canadian-designed front-line fighter, the all-weather Avro CF.100, was first flown in Jan. 1950, powered by two Rolls-Royce Avon turbo-jets. The Royal Canadian Air Force ordered ten of these in 1950, which would probably be powered with the successful Canadian Avro Orenda axial turbo-jet. Negotiations were reported under way for the manufacture of the Orenda in several European countries. The Avro C.102 jet liner attracted wide attention in its flights in 1950.

Australia. A small jet research plane, designed and built entirely in Australia, was reported late in 1950. It was described as an ultimate guided missile for fighter and anti-aircraft training, capable of very high speed and rapid rate of climb to high altitudes. The Armstrong Siddeley Adder, the turbo-jet version of the Mamba, was used in the prototype, which was flown by a pilot. The pilotless radio-controlled version would be powered by the Viper, an expendable version of the Adder, delivering 1,500 lb. thrust. The twin-jet long-range Australian fighter reported in 1949 to be under development was expected to reach the prototype stage late in 1950. It would have all swept-back surfaces. The Rolls-Royce Tay turbo-jet, which would be manufactured in Australia, was expected to furnish its power. Production was begun on the de Havilland Drover, designed as a light civil transport for Australian flying, but capable of use as a military freighter or an ambulance.

United States. *United States Air Force.* Participation in the Korean war as a member of the United Nations air-land-sea team took precedence over other U.S. air force activities during 1950. During the first half of 1950 budgetary limitations had necessitated a downward readjustment from previously planned strength. In spite of loss of personnel, the closing of installations and the curtailment of numerous plans, the air force sought to increase its fighting capacity, and to this end advanced a programme of joint training with the other military services. When war broke out in Korea on June 25, the U.S.A.F. accomplished the evacuation of U.S. nationals from the area of conflict with troop carrier aircraft. F-80s and F-82s, based in Japan, protected the evacuation area and escorted the transport planes. As a result of President Truman's decision on June 27 to use U.S. air and naval forces to carry out the mandate of the United Nations Security council, the far east air force began active combat operations.

F-51 (propeller-driven) and F-80 (jet) fighters helped to stop the mechanized advance of the Korean Communist army, while B-26 and B-29 bombers flew far behind the enemy ground force fighting lines to attack the invader's production, supply and distribution plants, and depots. After initial resistance by North Korean aircraft of Soviet manufacture, U.N. forces gradually achieved mastery of the air.

Construction funds were made available during Dec. 1949 for an Aircraft Control and Warning system, earlier authorized by congress, and in Oct. 1950 the air force announced a speed-up in the production of equipment and training of men to put the system into operation well before July 1951. The Lockheed F-94 (an adaptation from the F-80 day interceptor) was introduced into the continental air defence system as the first jet all-weather interceptor. The strategic air command was reorganized to give each of its three air forces its own reconnaissance and bombing capabilities, enabling each to work as a separate organization in launching an immediate counterstroke. The continental air command (Con.A.C.) was divided into three major commands, Con.A.C. retaining responsibility for the administration and training of the U.S.A.F. civilian components. The tactical air command had as its primary mission the development and training of tactical support aviation in conjunction with army field forces. The air defence command was to be responsible for air defence of the U.S. The air force special weapons command was established for the field development and testing of equipment and technique relating to atomic energy. The air research and development command was established to provide increased emphasis on the qualitative improvement of the air force. Largely as the result of the spring exercise in the supply of large-scale operations entirely by strategic air lift, the mission of the military air transport service was revised.

As an immediate result of the Korean conflict, congress passed legislation authorizing a 70-group air force, suspended the personnel ceiling and made supplementary appropriations increasing the military budget for fiscal year 1951 from $13,000 million to $24,000 million. By the end of Sept. 1950, approximately 1,100 of the 2,800 rated officers previously removed from flying status were restored. Construction was expedited. There was a general acceleration of the programme to meet increased defence needs, but the air force, in the second half of 1950, continued to emphasize the long-range programme especially in the field of research and development.

The XF-91 interceptor underwent performance tests during the year. The F-89 was the first jet aircraft accepted by the air force specifically designed as an all-weather interceptor. The F-86D was an all-weather interceptor version of the earlier F-86 day fighter. The jet YF-93, the XF-88 and the XF-90, three new penetration fighters, were evaluated. The F-84F was an improved version of previous F-84 models. The XB-51, a light bomber with crew of two, was the first postwar bomber specifically designed for ground support work. The XG-20 was a medium cargo assault glider, capable of being towed at a much higher speed than any operational gliders used in World War II. The XC-120 medium transport was a detachable compartment version of the C-119, unique in its possibilities. It was designed to test the feasibility of preloaded detachable cargo compartments.

The C-124 heavy cargo transport represented a milestone in air transportation because of its capacity and adaptability. An operational flight of the year was especially significant. On Sept. 22, two U.S.A.F. pilots, each flying an F-84 Thunderjet, took off from Manston, England, in a flight that made use



The Avro Canada CF-100 jet fighter, first flown in Jan. 1950.

of the drogue-probe refuelling system. Lieut. Colonel William D. Ritchie was forced to bail out over Labrador, but Colonel David C. Schilling completed the first non-stop transoceanic flight in a jet aircraft in 10 hr. 1 min. On Sept. 29 Capt. Richard V. Wheeler established a new (but unofficial) high-altitude bail-out record in an experimental jump from an altitude of more than eight miles (42,449 ft.) in an automatic opening parachute.

The air engineering development centre authorized by the congress in Oct. 1949 to provide the military service, private institutions and industry with facilities for exploring the aeronautical field beyond the sonic barrier, which was under construction at Tullahoma, Tennessee, was named the Arnold Air Engineering Development centre in honour of General Henry H. Arnold, who died on Jan. 15, 1950.

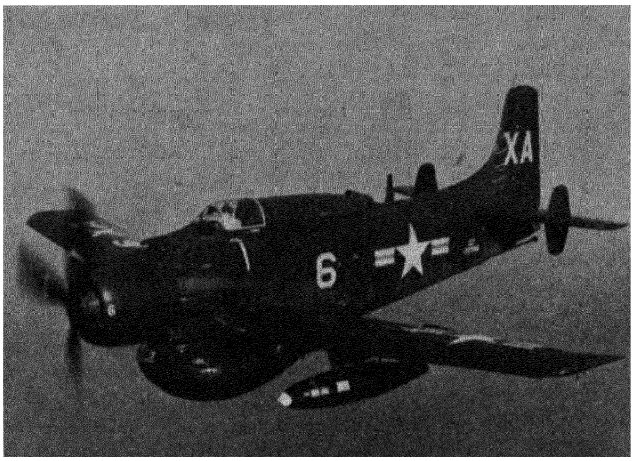
By May 31, 1950, the total number of officers and airmen on duty in the U.S.A.F. had declined to 408,844. By the end of August, command strength had been rebuilt to approximately 450,000 officers and airmen, with almost one-third of the total deployed overseas. At the same date, there were approximately 12,000 U.S.A.F planes in active status (H. S. VG.)

United States Navy. For naval aviation, as for other U.S. forces, the year 1950 was clearly divided. The first six months emphasized the continued effort to reach what was expected to be a permanent peacetime establishment. Then late in June a rapidly deteriorating international situation and the necessity for supporting United Nations forces in Korea caused an abrupt reversal. By the end of the year a total of four fleet carriers and two escort carriers had engaged in active operations in Korean waters. Naval patrol aircraft flying from land bases or supported by aircraft tenders, conducted daily reconnaissance flights and anti-submarine patrols. The first marine air wing also operated from shore bases in Korea and Japan. Transport squadrons of the navy and marine corps joined similar units of the air force in rushing men and equipment across the Pacific.

New equipment and aircraft types, notably jets and new attack planes, received thorough test under combat conditions. Helicopters made their first appearance in combat with the marines carrying supplies to forward units and evacuating casualties. The navy continued to press the design of improved jet-propelled fighter aircraft for carrier use. The AJ-1, a high-speed attack plane, went into service with fleet squadrons. Test-flying was begun on a patrol plane (XP5Y) and a carrier plane (XA2D), both powered by turbo-propeller engines. Equipment was devised for refuelling airships at sea and thus extending their usefulness in anti-submarine operations. Experiments with guided missiles aboard submarines and on the specially equipped U.S.S. "Norton Sound" were continued, and congress authorized the conversion of a cruiser to a guided missiles ship.

There were three large Midway-class carriers and six fleet carriers in the active fleet at the end of the year. About 3,400 officers and 24,000 enlisted men were added to the aeronautical organization of the navy and proportional increases occurred in marine corps aviation. Training of pilots was increased to produce about 1,500 yearly. At the end of the year, the navy had about 13,700 aircraft in its inventory, of which 7,200 were in operating status. (J. H. C.)

U.S.S.R. Attention in the west was centred on the U.S.S.R. as the source of the war potential in the east. Aircraft and armament used by the Chinese Communists and the North Koreans were manufactured in the Soviet Union. The Soviet air force was placed under the army in the reorganization announced in Feb. 1950. The army air organization consisted of a large force for the support of ground troops, an air defence force, principally of fighters, and a long-range air arm. The navy was equal to the army, under the reorganization, and its aircraft were administered as integral parts of the navy.



The United States AD-3W Skyraider powered by a 2,400 h.p. Wright R-3350 engine.

The U.S.S.R. undoubtedly had more troops, aeroplanes and submarines in service than any other nation. Western estimates placed the number of Soviet first-line military aircraft in service at about 15,000. Aeroplane production was estimated to be 7,000 planes per year early in 1950, and the country's capacity to produce planes was variously estimated at 40,000 to 50,000 planes per year. The U.S.S.R. was believed to have continued production after 1945 without the drastic reductions made in the west, at the same time emphasizing research on jet types, guided missiles and the atomic bomb. At the annual parades in May each year new jet types were flown over Red square, Moscow, and the Korean war brought the MIG-15 fighter into action for Communist China. These fighters were also reported late in 1950 in numbers over Berlin and other Soviet bases in Germany.

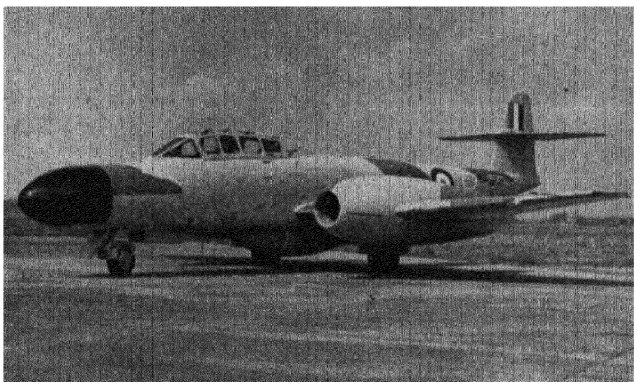
The Mikoyan and Gurevich MIG-15 was a swept-wing fighter powered by a centrifugal turbo-jet. Its speed was reported by U.S. pilots in Korea to be very high, particularly during bursts when power boost was used. The two standard advanced fighters in production in 1950 were the MIG-15 and the Lavochkin LA-17, both rated in the 685-m.p.h. class. With afterburning or other power boost, as in the case of the MIG-15 in Korea, they probably could travel at near-sonic speeds for short intervals. The Yakovlev YAK-17 fighter, also reported to be in production, was a third fighter using a centrifugal jet engine. It was first flown in 1947, and resembled the U.S. F-84 Thunderjet. Earlier piston fighters such as the YAK-7 and YAK-9, used in Korea, the LA-7, LA-9 and LA-11 and the twin-jet MIG-9, were still in service in large numbers in 1950.

Bomber development in the U.S.S.R. was not emphasized up to about 1947. In World War II Soviet bombers were typified by such twin-engined models as the Tupolev TU-2, Ilyushin IL-4 and the Petlyakov PE-2. Twin-jet prototypes were observed over Moscow in May 1950. The twin-jet TU-10 was an axial turbine-powered light bomber of 70-ft. wing span, estimated to be in the 525-m.p.h. class. The IL-16 four-jet bomber, first seen in 1947, was of conventional design. The principal Soviet bomber in service was the TU-4, generally considered to be a copy of the U.S. B-29. The IL-10 piston-engined Shturmovik was the standard ground-support aircraft in all Soviet-controlled air forces. Its maximum speed was 280 m.p.h. It was seen in numbers in Germany.

Rocket fighter development in the U.S.S.R. was based on the YAK-21 derived from the Messerschmitt Me-163 of World War II. It was reported capable of a climbing rate of 12,000 ft. a minute, and a top speed of 670 m.p.h., for a 15-20 minute duration.

Soviet Jet Engines. Soviet engine design showed in 1950 a trend toward more powerful axial-flow types, corresponding to the trend in the west. The axial-flow turbo-jet designs taken over by the U.S.S.R. from Germany in 1945 were developed slowly by Soviet and German engineers, without conspicuous success for the first several years after World War II. The best of the Soviet production fighters in 1950 were using centrifugal turbo-jets based on the Rolls-Royce Nene and Derwent engines sold to the U.S.S.R. in 1947. Later aircraft going into production were reported to be equipped with axial-flow types. The German BMW-003 and BMW-018 and the Jumo-004 were the basic designs for the later Soviet turbo-jets.

France. The best military aircraft made in France in 1950 were the de Havilland Vampire and the Dassault M.D. 450 Ouragan (Hurricane). One was a British fighter being built under licence, and the other was developed by a private aircraft company. The emphasis was upon defensive interceptors. There was no large production of bombers, no flying delta-wing research planes and little activity in missiles. The Rolls-Royce Nene, built under licence, was the only production turbo-jet. Production on the more powerful Rolls-Royce Tay was scheduled for 1951. Apart from the Vampire, the French air forces and navy were equipped mostly with aircraft from World War II surplus, to which U.S. jet aircraft were added late in 1950.



The British Gloster Meteor night fighter, Mk. II.

Italy. The importation of de Havilland Vampire fighters indicated how the Italian air force would replace some of its World War II surplus British and U.S. planes with new jet-powered equipment. Tooling was reported progressing late in 1950 for the production under licence of Vampire and Venom aeroplanes and Ghost and Goblin turbo-jets. The Italian aircraft industry's activity in arranging for the licensed manufacture of aircraft and engines was accompanied by design and development work on transports, light planes, trainers and fighters. Breda and Savoia-Marchetti transports, Fiat and Abrosini trainers and ventures into jet propulsion by Caproni and Fiat were the principal developments up to the end of 1950. The Caproni Ca.195 attracted most attention in the west. It was described as a conventional modern fighter, having a slightly swept-back leading edge, powered by two axial-flow turbo-jets producing 2,000 lb. thrust for a maximum speed of 565 m.p.h. at 20,000 ft. The Fiat G.80 two-seat jet trainer would be powered by a de Havilland Ghost turbo-jet.

Other Countries. According to the trend of 1950, air forces of the Atlantic pact nations and nations friendly to the west would be equipped largely with U.S. and British military aircraft, by purchase or by licensed manufacture. Soviet satellites would be largely supplied from the U.S.S.R. Construction of successful jet aircraft and engines was, however, in progress outside the U.S. and the United Kingdom. The Saab Aircraft company, supplier of numerous aircraft to the Swedish air force, was reported developing a successor to its J29 jet fighter of 1948. In the Netherlands, the Fokker Derwent-powered S.14 advanced trainer was reported nearing completion, and the S.13 twin-engined advanced trainer prototype was flown early in the year. This company was also manufacturing Gloster Meteor fighters for both the Netherlands and the Belgian air forces, and Hawker Sea Fury fighters for the Dutch navy. From the Argentine development was reported of the I.Ae.33 Fulqui II fighter, a swept-wing version of the first Argentine jet aeroplane of 1947. (*See* AIRCRAFT MANUFACTURE; JET PROPULSION AND GAS TURBINES; ROYAL AIR FORCE.) (M. H. SM.; S. P. J.)

AIRPORTS. Sir Robert Watson-Watt, the British radar scientist, commented during 1950 on the backward state of air traffic-control equipment as established at airports and on airways throughout the world: much of the existing radio and radar used in civil aviation was out-of-date as applied to conditions at that moment; and most of the control sets had been adapted from former military stock.

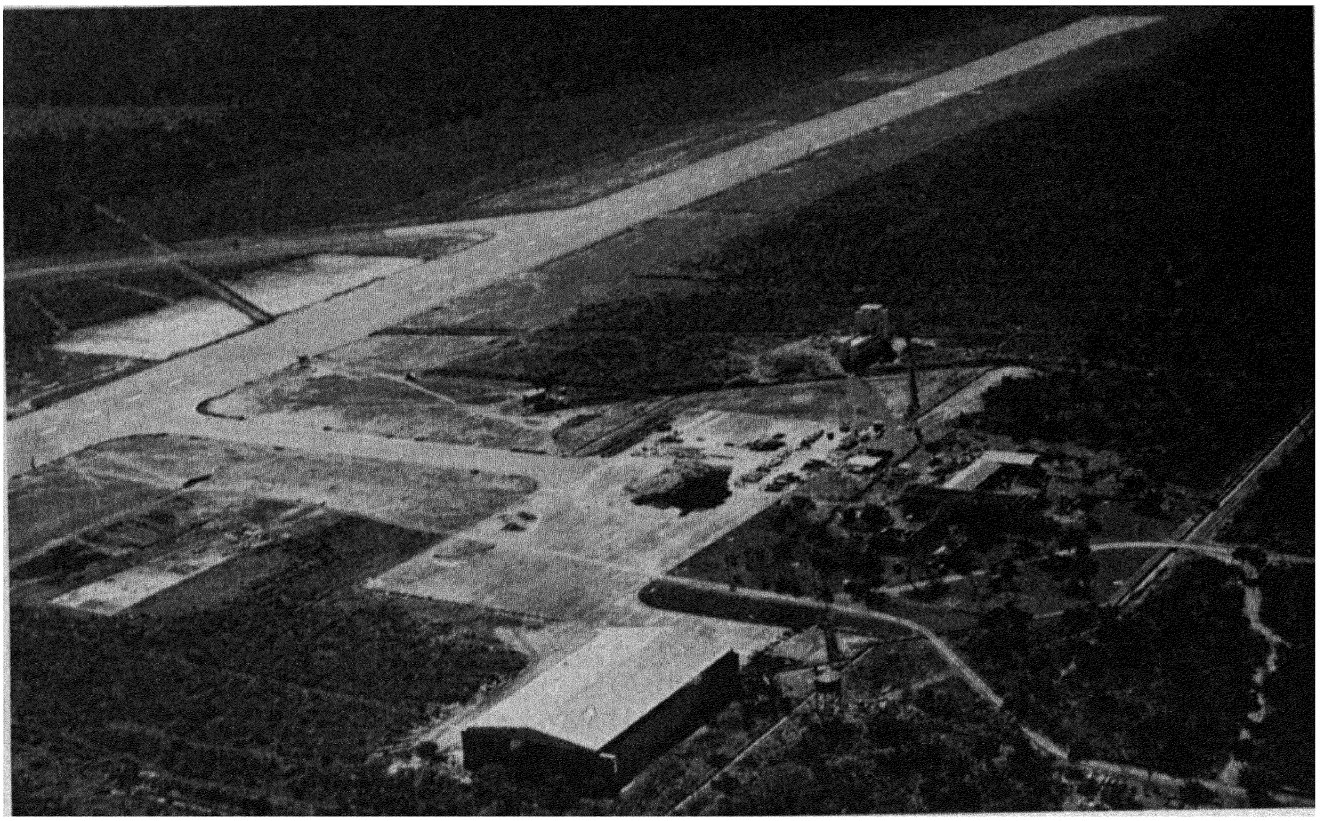
This opinion was shared by those in official administration of airports and was particularly significant in view of the approaching era of jet airliners with operational speeds of 500 m.p.h. Jet aircraft came into the civil picture in 1950, but for operating-economy had to fly at great heights. Any time spent in the air at low altitudes, such as was the practice for piston-engined types in approach-procedures to airports, would have introduced costly and sometimes impractical conditions for the new class of high-speed airliners. Consequently much of the progress in airport design and construction in 1950 was rather towards improving air traffic-control equipment, passenger- and freight-handling facilities and buildings than in the way of establishing new airports. In a number of instances this policy of improvement extended to the lengthening and strengthening of runways and other hard pavings so as to bring existing airports up to current international standards. This trend was especially noticeable in Europe, where for example a rejuvenated Ciampino airport near Rome carried the greatly increased air traffic for the Holy Year celebrations.

Great Britain. Probably of great importance to the air-traffic-control systems of the future was the installation of long-range radar search-equipment at London airport. By this means controllers were able to direct approaching and departing aircraft on scheduled flights within their area by reference to a radar picture showing the whole sky in azimuth up to a maximum of 150 mi.

A decision moreover was reached on Stage 3 development of London airport. The original duplicate "triangular" runway scheme north of the Bath road was abandoned in favour of a new plan on that site to construct two runways placed end to end and running east-west but slightly divergent from one another. The object of this off-set arrangement was to provide lateral separation for aircraft making simultaneous landing and take-off.

Africa. A new airport of considerable potentiality was opened to traffic on Aug. 12 by Lord Pakenham, British minister of civil aviation, at Livingstone, Northern Rhodesia. This airport, classed as C.2 under the specifications of the International Civil Aviation organization, was thought to have possibilities as a cross-roads of air routes in central and southern Africa; and its proximity to the Victoria falls on the Zambezi river was judged to be a great tourist attraction.

Similarly the new main Egyptian air terminal established at Farouk airport near Cairo was said to have possibilities as the cross-roads for north Africa and the middle east.



The largest airport in Northern Rhodesia at Livingstone, as seen from the air. The airport was opened in Aug. 1950 by the British minister of civil aviation, Lord Pakenham.

India, Pakistan and Australia. Little progress was reported towards the implementing of plans to extend and improve the international airports in these countries. Admittedly the physical problems were great: notably the surrounding foothills at Santa Cruz (Bombay), the swampy site of Dum Dum (Calcutta), the need for the reclamation of part of Botany bay for runway extension at Kingsford Smith (Mascot, Sydney) and constructional difficulties for a duplicate main runway at Drigh Road (Karachi).

Argentina. The new airport near Buenos Aires at Ezeiza became fully operational during 1950, with three runways capable of taking the largest and heaviest airliners and with adequate means for passenger- and freight-handling.

United States. With initial operational problems settled, the new international airport of Idlewild, Jamaica bay, controlled by the Port of New York authority, was handling greatly increased traffic in 1950. On the constructional side, some alleviation of the "dust bowl" nuisance was gained by the planting of sea-grass and more hangars of the unobstructed arch type were erected.

As regards New York's "internal" services, La Guardia airport reached almost saturation-point in aircraft movements: on one day alone some 630 were logged in and out. Newark airport, New Jersey was being developed, obviously to take much of that congested traffic; accordingly a very advanced design of terminal building was planned, and "pre-positioned" services for fuelling, lubricating, electrical charging etc. were being laid "on tap" to supersede the almost universal practice at airports of servicing aircraft by mobile tender. (C. F. As.)

The 1947 National Airport plan and the 1948 and 1949 revisions were based on a three-year forecast of the needs of civil aviation in the United States. The 1950 National Airport plan, accordingly, was assembled as revision and refinement of the preceding plans and showed a projected three-year forecast of aviation needs. It reflected an up-to-date appraisal of the way airports were serving the nation and what was required to round out safely and effectively the National Airport system.

The fiscal summary of the 1947-50 federal airport programme indicated that the federal government had expended or committed the sum of $130,731,802 for airport development and that the sponsors' contribution (state or territory) amounted to $140,741,656 for a total programme of $271,473,458.

Civil airports in Jan. 1950 numbered 6,484 and were classified as follows: class 1 and below (length from less than 1,800 ft. to 2,700 ft.) 4,100; class 2 (from 2,700 ft. to 3,700 ft.) 1,027; class 3 (from 3,700 ft. to 4,700 ft.) 576; class 4 (from 4,500 ft. to 5,500 ft.) 445; class 5 (from 5,500 ft. to 6,500 ft.) 185; classes 6, 7, 8 and (from 6,500 ft. by thousands to 9,500 ft. and more) 149. (Lengths were increased for elevations above sea level; classes 1, 2 and 3 had lengths decreased by 200 ft. if paved; classes 4-9 had to have at least one paved runway of a specified length.) Of these airports 2,585 were commercial, 2,200 municipal, 139 Civil Aeronautics administration landing fields and 350 military, with 1,210 of other types.

Airports for scheduled air service were assigned service types as defined in the Civil Aeronautics administration's technical standard order N6a as follows: feeder type (up to 3,500 ft.), for feeder-type service; trunk type (3,500 to 4,200 ft.), to serve on air-line trunk routes; express type (4,200 to 5,000 ft.), at large cities or important junctions on trunk routes; continental type (5,000 to 5,900 ft.), serving long non-stop continental flights; intercontinental type (5,900 to 7,000 ft.), serving long intercontinental or transoceanic flights; intercontinental express type (7,000 to 8,400 ft.), serving transoceanic flights of largest types of aircraft. Lengths were increased for elevation, temperature and gradient.

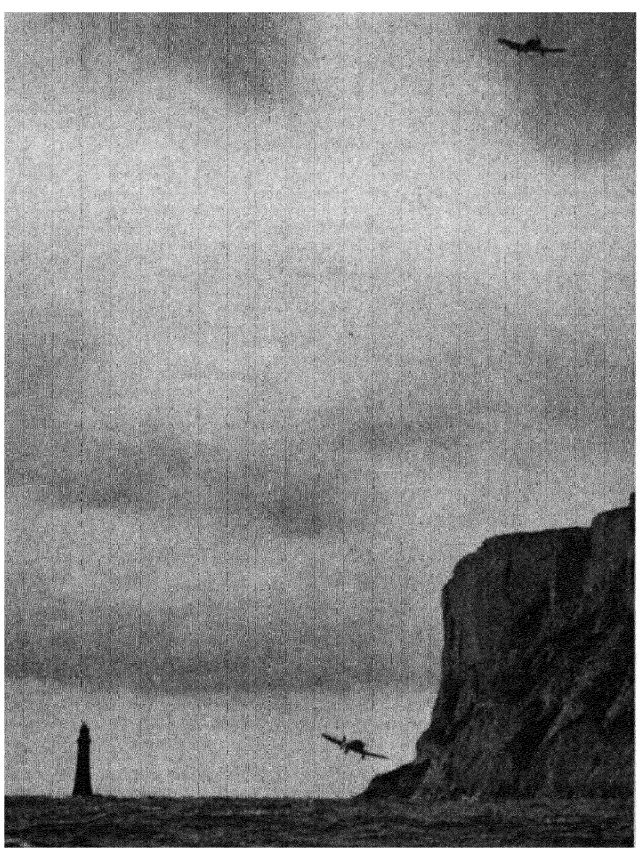
A three-year study of what was required to develop a

high-efficiency air freight terminal had reached a stage late in 1950 where specifications for the terminal and related components were nearly complete. In devising a terminal for efficient freight flow, a basic functioning part of the plan for an air freight depot was found to be a flexible, portable ramp device designed to eliminate, by bridging the aeroplane door to a terminal dock, the high hoist that makes aeroplane cargo loading a time-consuming and expensive operation. (*See* also AVIATION, CIVIL.) (E. M. E.)

AIR RACES AND RECORDS. The classic events of British air racing in 1950 were again dispersed to a number of provincial centres. Although the circuits necessarily varied, each race was flown as a handicap over a number of short laps based on the home aerodrome thus enabling some competitors to attempt speed records over the 100-km. closed circuit within weight categories laid down by the Fédération Aéronautique Internationale.

The King's cup, flown on June 17 over a three-lap course centred on Wolverhampton, was won by E. Day, flying a Miles Hawk trainer. F. Dunkerley, in his Miles Gemini (representing the Lancashire Aero club), was again successful in the Siddeley trophy, held on Sept. 2, and in the Kemsley trophy contest. Five world class records over the 100-km. closed circuit were set up during the King's cup race, among them Miss R. M. Sharpe's 322·5 m.p.h. in a wartime Spitfire; this was also a British women's record.

The two-lap Air League Challenge cup race (won by W. I. Lashbrook, Percival Proctor) and the Society of British Aircraft Constructors' Challenge cup contest for jet-powered aircraft were flown over the same course at Sherburn-in-Elmet, Leeds, on July 22. The S.B.A.C. race was won at an average speed of 533 m.p.h. by M. J. Lithgow, piloting a Vickers-Supermarine Attacker. Another 100-km. world record was achieved—L. R. Colquhoun's 209·46 m.p.h. with a Vickers-Supermarine Seagull—a new record for amphibians.



Two light aircraft taking part in the Bournemouth to Herne Bay air race in Sept. 1950

An entirely new race was organized by the *Daily Express* along the south coast of England from Hurn, Hampshire, to Herne Bay, Kent, on Sept. 16. This attracted an entry of 67 aircraft and was won in a Proctor by N. W. Charlton, who had started 48th.

An important world record was captured for Great Britain on May 12 by J. R. Cooksey, flying a Gloster Meteor 8. This was the 1,000-km. closed circuit at 511 m.p.h. (822·25 km.p.h.).

From July 1, aircraft using rocket-assisted take-off were eligible for F.A.I. speed record attempts. Other important changes in the rules were provision for speed records over a 15-25 km. course at unlimited altitudes (instead of over 3 km. at a height of below 200 m.), and the introduction of rate-of-climb records. In addition, the F.A.I. divided certain world records into two main categories: piston-powered and jet-propelled.

A number of international course records (hitherto known as point-to-point records) were set up during the year, notably seven by the prototype de Havilland Comet, piloted by J. Cunningham; three of these were later exceeded. (G. D. H. L.)

ALASKA, including the Aleutian Islands, the northernmost territory of the United States is separated from Siberian U.S.S.R. by the Bering strait. The boundary line runs between the Big Diomede Island (Soviet) and the Little Diomede Island (U.S.). Area: 586,400 sq.mi. Pop.: (1940 census) 72,524; (1950 census) 128,643, excluding U.S. military, naval or coastguard personnel. Chief towns (pop. 1950): Juneau (cap., 5,818); Anchorage (11,060); Fairbanks (5,625); Ketchikan (5,202); Petersburg (2,291). Governor since 1939, Ernest Gruening.

History. An epidemic of infantile paralysis broke out in Alaska during 1950 and at the end of the year 70 cases were reported in the territory, the majority of them in the interior area around Fairbanks. Advances were made in improving the hospital system. A new 400-bed sanatorium was completed at Anchorage; a 40-bed wing was added to St. Joseph's hospital; a new 34-bed hospital was finished at Nome and 125 beds were added at Mt. Edgecumbe sanatorium near Sitka. The latter institution previously had 200 beds.

Millions of dollars went into the building up of the defences in Alaska in 1950. The army and navy were spending more than $120 million for construction, and more than $4 million more was earmarked for improving the Alaska communication system, a branch of the army. Another $1,500,000 was being spent to repair the Alaska railroad, a government-owned line which operates through interior Alaska from Seward to Fairbanks and to Whittier, a port, like Seward, on the southwest coast.

Education. Alaska in 1950 had 32 high schools with 2,169 pupils and 182 teachers; 94 elementary schools with 10,727 pupils and 471 teachers. For native children, the Alaska native service, a division of the U.S. Department of the Interior, maintained 85 day schools and 3 boarding schools, with 5,000 pupils.

Fisheries. Alaska's salmon pack, considered the largest in the world, totalled 3,177,003 cases in 1950 with a value of $85 million. The halibut, shrimp, crab and cod fishery brought the total value of the sea-food pack of the territory up to more than $100 million for the year.

Mining. Total value of mineral production for 1950 was slightly more than $15 million, gold accounting for $8 million while the balance represented coal, silver, copper, lead, zinc and platinum. The gold strike of 1949 in the Yukon river area northeast of Fairbanks failed to develop in 1950. The few claims which revealed possible bonanza production could show no colour worthy of production on large-scale operation.

Banking and Finance. Net cash balance (end of 1950): $2,728,117. Alaska has no bonded indebtedness and operates on a cash basis. Funds of the territory were deposited in the 17 territorial banks and 4 national banks situated in Alaska. (L. M. W.)

ALBANIA. People's republic in the western part of the Balkan peninsula bounded N. and E. by Yugoslavia and S. by Greece, with an Adriatic coastline of 200 mi. Area: 10,629 sq.mi. Pop.: (1930 census) 1,003,097; (mid-1950 est.) 1,300,000. Language: literary Albanian and two spoken dialects, the *Gheg* north of the river Shkumbi and the *Tosk* in the south. Religion (1949 est.): Moslem 820,000; Greek Orthodox 250,000; Roman Catholic 115,000. Chief towns (1949 est.): Tirana (cap., 40,000); Scutari or Shkodër (30,000); Koritsa or Korçë (28,000); Elbasan (18,000). Chairman of the presidium of the People's Assembly, Dr. Omer Nishani; prime minister, minister of foreign affairs and of national defence, General Enver Hoxha.

History. The Communist government remained subservient to Soviet policy and there was no change in the hostile attitude towards Greece and Yugoslavia. Hunger, approaching famine in winter, and widespread disease were the results of a year of political and economic isolation. This situation was only partially relieved at the end of the year by shipments of consumer goods and light industrial equipment from the Soviet Union and its satellites. Repeated government claims of success in industry through the employment of " stakhanovite " methods and in agriculture by the development of the Soviet collective system, were exaggerated. A realistic picture of the situation was given on March 9 when four senior government officials, including the minister of industry, Abedin Shehu, were expelled from the central committee of the Communist party for what was termed " serious errors and mistakes in state and party work." One month later, on April 10, Enver Hoxha, addressing the second national conference of the party at Tirana, stated that more than 5,000 " enemies of the people " had been chased by the defence corps over the border into Yugoslavia. The prime minister also condemned the minister of industry for the failure of the economic plan.

Two espionage trials, at which six Albanians were accused of spying on behalf of the western powers, preceded the general election on May 28. Full publicity given to the death sentences provided a resentful electorate with a timely reminder of their expected loyalty to the regime. There were the usual single lists of Communist candidates in 121 constituencies, each with an electorate of about 10,000. Official results claimed an outstanding victory. Out of 99·43% of the electorate who voted 98·99% votes were cast for the Democratic front (Communist) candidates.

On May 30 Yugoslavia closed its legation in Tirana after protesting against numerous frontier incidents and maltreatment of its diplomatic officials. During the year western diplomatic representation remained restricted to the French and Italian legations. Great Britain's attempts to obtain compensation, awarded by the International Court of Justice, for the damage caused to its two destroyers by mines in the Corfu channel in 1947 were unsuccessful.

The United Nations Special Committee on the Balkans established that the government had actively interfered in Greek affairs by providing both the arms and the means for Greek Communists to return to Greece after they had received a period of political and sabotage training in Poland under Soviet instruction. It was learned that the majority of Greek guerrillas who had escaped to Albania in 1948 had been removed by ship to Rumania and Poland.

In September there was a Soviet month of culture and a Korean friendship week, during which funds were collected for the North Koreans. Delegations of technicians, workers, Orthodox and Moslem clergy and peasants visited the U.S.S.R. to learn Soviet methods. A Soviet mission, composed of more than 3,000 technicians, directed the construction of a railway line from Durazzo (Durrës) to Tirana and the erection of port installations at Valona (Vlorë). Despite the faithful allegiance of the government to Moscow, Albania was not granted membership of the Cominform nor was she brought into the network of mutual aid treaties, which bind all the other satellites to the Soviet Union.

The Free Albania committee, composed of anti-Communist leaders in exile, continued its activity in Rome. Hasan Dosti was appointed chairman and Ihsan Toptani became the Albanian representative on the eastern section of the European movement. (S. E. Ws.)

Education. Schools (1949): elementary 1,910, pupils 162,000; higher elementary 145, secondary 20, total pupils 19,140. A teachers' college was opened at Tirana in 1946.

Agriculture. Main crops ('000 metric tons): maize (1947) 140; wheat (1947) 54; tobacco (1945) 1·5; olives (prewar) 17; grapes (prewar) 14. Livestock ('000 head): cattle and buffaloes (1945-46) 371; sheep (1946) 1,700; horses (1946 est.) 50; pigs (1946 est.) 35; goats (1946 est.) 854; asses (1946 est.) 40; mules (1946 est.) 10; chickens (1938) 2,000.

Industry. Crude oil production ('000 metric tons, 1949; 1950, six months, in brackets): 325 (165).

Foreign Trade. Before 1939, main imports were cotton yarns and manufactures, petrol, wheat and maize. Main exports were crude petroleum, skins and hides, foodstuffs.

Transport and Communications. Roads (1949): 1,766 mi. Licensed motor vehicles (Dec. 1949): cars 500; commercial 1,200. Railways (1949): 26 mi. Shipping (1949): number of merchant vessels 6. Post and telegraph offices 53. Radio receiving sets (1949) 40,000.

Finance. Monetary unit: *lek*, until mid-1948 at par with the Yugoslav dinar, with an official exchange rate 139 lek to the pound and 49·6 lek to the U.S. dollar.

See " Isolation of Albania," *The Times*, London, Feb. 1, 1950; Vandeleur Robinson, " Albania: a Balkan Bridgehead," *The World Today*, London, Feb., 1950.

ALDER, KURT, German chemist (b. July 10, 1902), obtained the degree of doctor of philosophy from the University of Kiel, where he was a pupil of Otto Diels (*q.v.*). He was appointed extraordinary professor of chemistry at Kiel in 1934 but later went to occupy the chair of chemistry and chemical technology at Cologne. In 1950 the Nobel prize for chemistry was awarded jointly to Diels and Alder for their work on diene synthesis (the Diels-Alder reaction). Diene synthesis is concerned with the formation of complex organic compounds such as plastics and is of great practical as well as theoretical importance. The discovery was an outstanding achievement of organic chemistry, such as would establish the names of Diels and Alder permanently in the annals of their science. Their first paper on the reaction was published in 1928. Alder, who was still working on the diene synthesis in 1950, made important contributions to the stereochemistry and the energetics of the process. (W. J. Bp.)

ALGERIA. French territory of north Africa, situated between Morocco (west) and Tunisia (east), with a status of government general of the French Union. Total area: 851,078 sq.mi., administered in two parts: Northern Algeria (80,919 sq.mi.), comprising the overseas *départements* of Algiers, Oran and Constantine, and the four territories of Southern Algeria (770,159 sq.mi.). Pop.: (1936 census) 7,234,684; (1948 census) 8,676,016 including 816,993 (9·4%) in the southern territories. Arabs and Berbers constitute 86·7% of the population; they are Moslem and speak Arabic, though the countryfolk of Kabylia still use the Berber tongue. In 1936 there were 987,252 Europeans in Algeria (predominantly Roman Catholic), including 853,209 French citizens (many of Spanish or Italian descent). There was a flourishing Jewish community estimated in 1949 at 130,000. The Algerian Assembly, which has the representative nature of a parliament, consists of 120 members elected by two colleges. In the first college there are all citizens of French status and Moslems distinguished by military, university, administrative or judicial qualifications; in the second college are grouped all other Moslem citizens. It is the task of the Assembly to manage Algerian affairs in agreement with the

governor general. It passes the budget and possesses statutory powers in fields which in metropolitan France are objects of legislation. It may propose to the French parliament the extension of a law to Algeria; or it is, at the least, called upon for advice. The governor general has wide powers. Chief towns (1948 census): Algiers (cap., 315,210); Oran (256,661); Constantine (118,774); Bône (102,823); Tlemcen (69,668). Governor general (appointed in 1948), Marcel-Edmond Naegelen.

History. Despite constant bitter attacks by the Nationalist Democratic Union of the Algerian Manifesto (U.D.M.A. or Union Démocratique du Manifeste Algérien, led by Ferhat Abbas) in its organ *La République Algérienne*, and notwithstanding violent pan-Arab opposition by the Movement for the Triumph of Democratic Liberties (M.T.L.D. or Mouvement pour le Triomphe des Libertés Démocratiques, led by Messali Haj), conditions remained calm. Public opinion appeared little disturbed by the plot engineered by the paramilitary organization of the M.T.L.D., which in May led to many arrests. Of greater importance was the action taken by the ulemas to ensure the independence of the Moslem faith in relation to the state and to develop the teaching of Arabic. The president and vice president of their association in December visited Paris to petition the government for full religious liberty. Under the education scheme 500 new classes with capacity of 25,000 pupils were opened for instruction in French. The extension by special enactment of the term of office of the governor general Naegelen, which by the statute of the National Assembly (of which he is a member) was due to expire in August, gave rise to discussion.

The country depends mainly on agriculture the total production in which amounted in 1949 to Fr. 128,200 million. Wine, figs and dates failed to reach the estimated export targets. The index number of mining production rose from 100 in 1945 to 223 in 1949. Prospects for the development of the manufacture of paper from alfalfa grass, and of cement seemed promising. During the first half of 1950 the adverse balance of trade showed no signs of improvement.

Agriculture. Main crops (1949, '000 metric tons): wheat 946·4; barley 890·4; oats 142·3; citrus fruits 223; olives 125; figs 80; dates 105; tobacco 20; vegetables 544; wine ('000 hl.) 14,467. Livestock (1949, '000 head): cattle 747; sheep 3,839; goats 2,596; pigs 160; horses 204; asses 255; mules 230; camels 138.

Industry. Mineral production (1949, '000 metric tons); phosphate rock 644·8; coal 258; iron ore 2,536·9; zinc ore 17·4. Industrial production (1949, metric tons): pig iron 6,418; steel 893; copper 3,721; cement 128,000; superphosphates 87,888; telephonic cables 4,193; matches 128 million boxes.

Foreign Trade. (Million francs, 1949; 1950, six months, in brackets) imports 127,521 (72,492); exports 88,709 (50,636).

Transport and Communications. Railways (1947): 4,338 km. Metalled roads (1947): northern Algeria 52,519 km., southern Algeria 282 km.; non-metalled roads 15,046 km.; tracks 20,575 km. Motor vehicles licensed (Jan. 1948): cars 26,165, coaches 1,003, taxis 1,387, lorries 19,895. Ships entered (1949): Algiers 3,041, Oran 2,437; cargo unloaded (in all ports, '000 metric tons): 2,910·2, loaded 5,811·8. Air transport (1949): aircraft landed 10,916; passengers flown: arrivals 118,700, departures 147,000; freight carried (metric tons) 19,324, mail 860. Telephone subscribers (1949): 56,000.

Finance. Budget (1950-51 est., the fiscal year beginning April 1): revenue Fr. 72,530·1 million, expenditure Fr. 72,508·9 million. Algerian franc = metropolitan franc; £1 = Fr. 980; U.S. $ = Fr. 350. (C. A. J.)

ALIENS. Great Britain. The number of aliens over 16 years of age registered in the United Kingdom on Oct. 1, 1950, was 426,437 (males 261,915; females 164,522), of whom 139,994 were living in the metropolitan police district (London). The figure on Jan. 1 was 430,058. The principal nationalities represented and the numbers of each compared with similar figures at the same date in 1949 were: Austrian 10,037 (11,034); Belgian 5,520 (6,467); Chinese 9,725 (9,367); Czechoslovak 6,017 (7,207); Dutch 9,117 (9,158); Estonian 5,599 (5,816); French 14,901 (14,087); German 47,762 (44,249); Hungarian 4,996 (5,536); Italian 21,672 (18,667); Latvian 13,794 (13,855); Lithuanian 6,860 (7,165); Norwegian 5,966 (5,868); Polish 145,524 (150,378); Russian 38,172 (40,785); Swiss 12,878 (13,107); U.S. 18,283 (16,656). The figures included 11,000 aliens to whom no nationality could be attributed.

Among aliens not required to register and therefore not included in these figures were members of the diplomatic and consular services of foreign governments, certain officials of international organizations, members of Allied forces on duty, British protected persons and tourists and other visitors who spent less than two months in the U.K.

The flow of foreign passenger traffic through United Kingdom ports continued to be heavy, and the number of incoming travellers remained at nearly 650,000. In July 1950, 114,738 foreigners landed at United Kingdom ports, and 97,062 embarked. Similar figures in July 1949 were 101,768, and 84,076. Further steps were taken to reduce formalities at ports of arrival and to facilitate the passage of tourists through the necessary controls.

As a result of individual visa agreements, nationals of the following countries were not required to obtain visas for travel to the United Kingdom: Belgium, Denmark, France, Iceland, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Norway, San Marino, Sweden, Switzerland and the United States.

By Oct. 1, 1950, some 77,000 aliens, mostly of Polish or Baltic origin, who had been temporarily accommodated in displaced persons camps on the continent, had been admitted for employment in the United Kingdom with a view to settlement. With them came nearly 4,000 dependants. These foreigners were restricted to employment in undermanned industries but from Jan. 1, 1951, those with three years residence would be free to take any work they could obtain.

Out of the 174,000 Polish servicemen brought to the United Kingdom after mid-1945, some 61,500 were repatriated and 17,000 assisted to emigrate. The remainder settled in civilian life in Great Britain, and 31,000 persons dependent on them were brought from abroad to join them. During 1950 about 2,000 further Polish refugees were admitted from the Lebanon and east Africa.

The number of foreigners admitted after the end of World War II under compassionate schemes introduced to allow relatives in the United Kingdom to offer homes to aliens in isolated and distressed circumstances abroad, or the victims of political persecution, rose to over 7,000. During 1950 the government agreed to admit 2,000 displaced persons in the care of the International Refugee organization in Germany or Austria, provided their accommodation and maintenance were guaranteed by individuals or organizations in the United Kingdom. About 2,000 foreigners were allowed to remain in the United Kingdom after marriage to British subjects.

In 1950 about 36,000 permits were issued for non-resident foreigners to come and work in the United Kingdom for periods of varying length. This maintained the average of previous years. The majority of permits were for domestic employment in hospitals, institutions and private households.

Between Jan. 1 and Oct. 1, 1950, 5,702 new applications for naturalization were lodged, compared with a yearly average of 1,708 before World War II, and 5,610 for the same period in 1949. Certificates granted during the same period numbered 5,197, an annual rate of approximately 6,950 as compared with 9,066 in 1949. The number of applications received immediately after World War II was abnormally high and the time taken in dealing with individual applications was necessarily slower. The decrease in the number of certificates granted in 1950 indicated that the bulk of the postwar applications had been disposed of and that numbers had returned to a normal level. (T. G. W.)

United States. It is estimated that there were approximately 3 million resident aliens in the continental United States on June 30, 1946. This estimate does not take into account persons there temporarily, that is, non-immigrants, border crossers and imported labourers.

Naturalizations. During the year ended June 30, 1950, 66,346 petitions for naturalization were granted to non-citizens and during 1950 2,276 petitions were denied.

In addition to those persons whose U.S. citizenship was revoked, 5,792 persons expatriated themselves by affirmative action: 1,693 by voting in foreign political elections; 1,096 through naturalization in a foreign state; 1,424 by taking up residence in a foreign state; 721 by serving in foreign armed forces; 109 by leaving the U.S. to avoid military service and for other reasons.

NON-CITIZENS NATURALIZED IN THE U.S., 1947-50
(Years ended June 30)

Former nationality	1950	1949	1948	1947
British	12,697	13,284	12,361	20,328
Canadian	5,882	5,347	3,860	*
German	6,065	5,777	7,486	10,703
Italian	8,743	8,301	9,452	11,516
Polish	3,793	4,371	5,136	6,495
Russian	2,122	2,752	3,143	3,562
Filipino	3,257	3,478	5,768	10,764
Other	23,787	23,284	22,944	30,536
Total	66,346	66,594	70,150	93,904

* Included with British.

New Legislation. On April 20, 1950, S.3455—an omnibus bill having as its objective the complete revision of immigration and nationality laws—was introduced in the Senate. One of the more important legislative enactments of the year affecting the work of the immigration and naturalization service was public law No. 555, approved June 16, 1950, which amended the Displaced Persons act of 1948. Under the amending act the number of refugees and displaced persons who might be admitted to the U.S. was increased to 415,744. Additional safeguards were provided against the entry of those whose admission to the U.S. would be against the national interest. The Department of State was given authority to determine eligibility for certain groups outside Germany and Austria. The date for issuance of visas under the Displaced Persons act generally was extended to June 30, 1951, although in some instances (such as applicants who were orphans or had been expelled from Germany), visas might be issued until June 30, 1952.

Public law 587, approved June 30, made 250 special quota immigration visas available to certain alien sheep-herders for a period of one year. (*See* also IMMIGRATION AND EMIGRATION.) (A. R. MACK.)

ALIMENTARY SYSTEM. *Oesophagus.* The importance of the psychomatic factor in irritable colon, cardiospasm, pylorospasm, anorexia nervosa and possibly peptic ulcer and chronic ulcerative colitis was generally conceded. Stewart Wolf, T. P. Almy and Catherine R. Lee reported experimental observations on cardiospasm in 14 human subjects. Their studies indicated that the dilated, elongated and obstructed oesophagus of cardiospasm may be the end-stage of a process which in early stages is reversible and never entirely static. In all patients episodes of symptomatic exacerbation and remission could be correlated with variations in life-situation, feeling-state and attitude.

Stomach and Duodenum. Works on peptic ulcer continued to dominate gastro-enterologic literature in 1950. Interest was displayed in aetiology in differentiating small ulcerating gastric carcinoma from benign gastric ulcer and also in more effective methods of medical treatment. A. C. Ivy, M. I. Grossman and W. H. Bachrach revealed the multiplicity and interdependence of factors in the production of experimental ulcer in the rabbit and dog and the superimposition of one factor on another and looked forward to the day when mutilating operations for ulcer would be unnecessary (*Peptic Ulcer*, pp. 766, 1088, Philadelphia, 1950). The parasympatholytic chemical agent, banthine, was found to be usually effective in the treatment of uncomplicated ulcer, especially if the drug was well tolerated. The results of vagotomy after a five-year follow-up of thousands of cases were almost identical with those of gastro-enterostomy.

Prolonged and excessive intake of milk (containing large amounts of calcium and phosphorus) and alkali in the treatment of peptic ulcer may cause damage to the kidneys, tendency to fixation in urinary calcium secretion, excessive calcium in the blood, tendency to supersaturation with calcium phosphate and deposition of calcium salts in body tissues, according to the observations of C. H. Burnett, R. R. Commons, Fuller Albright and J. E. Howard. Clinical improvement followed intake low in milk and alkali.

To ascertain whether gastric juice is hypersecreted before the development of ulcer and of duodenal ulcer in particular, R. Doll, F. A. Jones and N. F. Maclagan undertook a follow-up study on 100 normal medical students who had been subjected to histamine test meals 15 years earlier. Subsequent medical histories were obtained in 85 of the original group. The results indicated that hypersecretion is a cause rather than an effect of ulcer.

R. C. Batterman and I. Ehrenfeld concluded after investigation that tobacco-smoking is detrimental to the peptic ulcer patient: of 108 patients observed 39 were non-smokers and 26 discontinued smoking on first seeking treatment.

Hepatobiliary and Pancreatic Systems. Experiences in differential diagnosis of jaundice by needle biopsy of the liver were reported by F. G. Weisbrod, L. Schiff, E. A. Gall, F. P. Cleveland and J. R. Berman (*Gastroenterology*, 14: 56-72, Jan. 1950). From 157 patients with jaundice 181 adequate liver biopsies were obtained. Diagnosis based on biopsy was shown to be more reliable than that based on the combined results of certain tests of liver function, namely cephalin flocculation, thymol turbidity and serum alkaline phosphatase determinations in the various forms of jaundice studied. Errors in differentiating virus hepatitis from obstructive jaundice on the basis of needle biopsy under certain circumstances were pointed out.

The detection of chronic pancreatitis in its earlier stages had been exceedingly difficult, and an advance in diagnosis apparently depended on results of tests of pancreatic function. Norms were established for total secretory volume, concentration of bicarbonate and total bicarbonate and amylase responses to a standard commercially available preparation of secretin. A study of the data by D. A. Dreiling and Franklin Hollander yielded evidence making necessary the use of an 80-min. collection period and the inclusion of enzyme determinations in the clinical application of the procedure. Body-weight adjustment of the values for total volume of secretion and total quantity of amylase resulted in a marked decrease in a scatter of the data and therefore a narrowing of the range of normalcy; volume and enzyme data should therefore be reduced to a per kilogram basis.

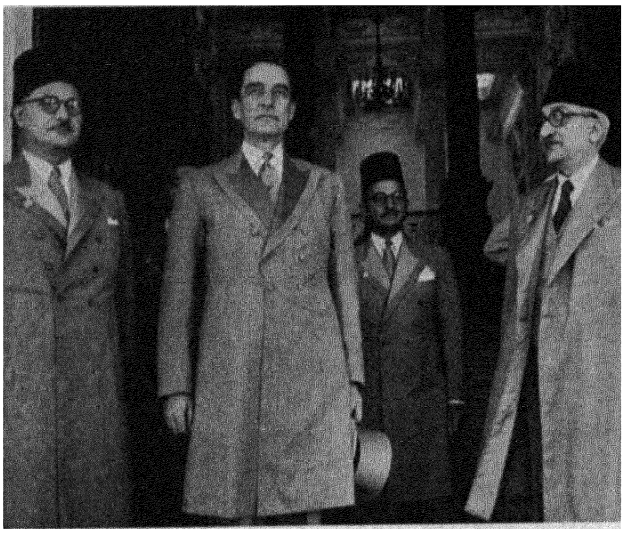
Intestines. Sulphonamides reduce the carrier rate following the acute phase of bacillary dysentery, but reports were contradictory as to their efficacy in other respects during this phase. Streptomycin is uniformly effective in relieving the symptoms of tuberculous enteritis. H. H. Anderson and his associates found the thioarsenates highly effective and superior to all other arsenical amoebacides. Aureomycin in the treatment of refractory amoebiasis was followed by encouraging results. The potency of chloroquine in the treatment of hepatic amoebiasis was amply confirmed.

(G. B. EN.)

AMBASSADORS AND ENVOYS. The following is a list of ambassadors and envoys to and from Grea Britain, Dec. 31, 1950.

To Great Britain	*Country*	*From Great Britain*
*Shah Wali Khan	Afghanistan	*Sir Alfred John Gardiner
*Carlos Alberto Hogan	Argentina	*Sir John Balfour
Lothar Wimmer	Austria	‡Sir Harold Anthony Caccia
*Vicomte Obert de Thieusies	Belgium	*Sir John Helier Le Rougetel
*Napoleon Solares Arias	Bolivia	*John Garnett Lomax
*J. J. Moniz de Aragão	Brazil	*Sir Nevile Montagu Butler
Naiden K. Nikolov	Bulgaria	Paul Mason
	Burma	*Richard Langford Speight
*Manuel Bianchi	Chile	*Sir Cecil Bertrand Jerram
	China	†John Colville Hutchison
*Rafael Sánchez Amaya	Colombia	*Gilbert MacKereth
†Guillermo Padilla Castro	Costa Rica	Bernard Ponsonby Sullivan
*Roberto González de Mendoza y de la Torre	Cuba	*Adrian Holman
*Rudolf Bystrický	Czechoslovakia	*Philip Mainwaring Broadmead
*Count Eduard Reventlow	Denmark	*Sir Alec Randall
Julio Vega Batlle	Dominican Republic	Stanley Herbert Gudgeon
*Gonzalo Zaldumbide	Ecuador	*John Eric Maclean Carvell
*Abd-el-Fattah Amr Pasha	Egypt	*Sir Ralph Clarmont Skrine Stevenson
Ato Abbebe Retta	Ethiopia	Daniel William Lascelles
Eero Aarne Wuori	Finland	Oswald Arthur Scott
*René Massigli	France	*Sir Oliver Charles Harvey
¶Hans Schlange-Schoeningen	Germany	††Sir Ivone Augustine Kirkpatrick
*Leon Victor Melas	Greece	*Sir Clifford Norton
Francisco Linares Aranda	Guatemala	Wilfred Hansford Gallienne
Frédéric Duvigneaud	Haiti	David Jarvis Mill Irving
Tiburcio Carius	Honduras	Gerald Ernest Stockley
Elek Bolgár	Hungary	Geoffrey Wallinger
Stefán Thorvardsson	Iceland	John Dee Greenway
*Subandrio	Indonesia	*Derwent William Kermode
*Emir Zeid ibn al-Hussein	Iraq	*Sir Henry Mack
*Frederick H. Boland	Ireland, Republic of	*Sir Gilbert Laithwaite
Eliahu Elath	Israel	Sir Alexander Knox Helm
*Tommaso Gallarati-Scotti	Italy	*Sir Victor Mallet
	Japan	§ Sir Alvary Gascoigne
Emir Abdul-Majid Haidar	Jordan	Sir Alec Kirkbride
Tchi Chang Yun	Korea	Vyvyan Holt (taken prisoner by North Koreans, July 1950)
Victor Khouri	Lebanon	Sir William Evelyn Houston-Boswall
Baron Robert Aernout de Lynden	Liberia	John Gilroy Baillie
André Clasen	Luxembourg	Geoffrey Allchin
*Federico Jimenez O'Farrill	Mexico	*John William Taylor
*Shanker Shumshere Jung Bahadur Rana	Nepal	*Sir George Falconer
*Jonkheer E. Michiels van Verduynen	Netherlands	*Sir Philip Nichols
	Nicaragua	Nigel Oliver Willoughby Steward
*Per Preben Prebensen	Norway	*Michael Robert Wright
Bernardino González Ruiz	Panama	Eric Arthur Cleugh
Augusto Saldivar	Paraguay	Ian Henderson
*Ali Soheily	Persia (Iran)	*Sir Francis Michie Shepherd
*Ricardo Rivera Schreiber	Peru	*Sir James Leishman Dodds
José E. Romero	Philippines	Linton Harry Foulds
*Jerzy Michałowski	Poland	*Sir Charles Harold Bateman
*Ruy Ennes Ulrich	Portugal	*Sir Nigel Ronald
Nicolae Cioroiu	Rumania	Walter St. Clair Howland Roberts
J. Arturo Castellanos	Salvador, El	Ralph Henry Tottenham-Smith
*Sheikh Hafiz Wahba	Saudi Arabia	*Alan Charles Trott
†Duke of San Lucar la Mayor	Spain	†Douglas Frederick Howard
*Bo Gunnar R. Hägglöf	Sweden	*Sir Harold Lister Farquhar
Henry de Torrenté	Switzerland	Patrick Stratford Scrivener
Edmond Homsy	Syria	William Horace Montagu-Pollock
*Phra Bahiddha Nukara	Thailand (Siam)	*Sir Geoffrey Thompson
*Cevat Açikalin	Turkey	*Sir Noel Charles
*Gheorghy N. Zarubin	Union of Soviet Socialist Republics	*Sir David Kelly
*Walter Sherman Gifford	United States of America	*Sir Oliver Franks
*Enrique E. Buero	Uruguay	*Douglas Frederick Howard
‖Archbishop William Godfrey	Vatican	Sir J. V. T. W. T. Perowne
*Carlos Sosa-Rodriquez	Venezuela	*Sir John Hall Magowan
Tran Van Don (designate)	Vietnam	Frank Stannard Gibbs (also accredited to Cambodia and Laos)
*Jože Brilej	Yugoslavia	*Sir Charles Peake
	United Nations	**Sir Hubert Miles Gladwyn Jebb

* Ambassador. Unstarred, Minister. † Chargé d'Affaires. ‡ Also United Kingdom High Commissioner in Austria. § Political Representative. ‖ Apostolic Delegate. ¶ Consul General. ** Permanent U.K. representative to the United Nations. †† High Commissioner to West German federal government.



Sir Ralph Stevenson (centre), British ambassador to Egypt, seen after presenting his credentials to King Farouk, June 1950.

The following is a list of high commissioners within the Commonwealth of Nations, Dec. 31, 1950.

From Australia to	
Canada	Francis Michael Forde
Ceylon	Charles William Frost
Great Britain	*Eric John Harrison
India	Herbert Roy Gollan
New Zealand	Arthur Roden Cutler
Pakistan	John Egerton Oldham
South Africa	(vacant)
From Canada to	
Australia	Léo-Richer LaFlèche
Great Britain	L. Dana Andrews
India	Warwick Fielding Chipman
New Zealand	Alfred Rive
Pakistan	David Moffat Johnson
South Africa	T. W. L. MacDermot
From Ceylon to	
Australia	J. Aubrey Maartensz
Great Britain	Sir Oliver Goonetilleke
India	C. Coomaraswamy
Pakistan	T. B. Jayah
From Great Britain to	
Australia	Edward John Williams
Canada	Sir Alexander Clutterbuck
Ceylon	Sir Walter Crossfield Hankinson
India	Sir Archibald Nye
New Zealand	Sir Charles Roy Price
Pakistan	Sir Laurence Grafftey-Smith
South Africa	Sir Evelyn Baring
Southern Rhodesia	Ian M. R. MacLennan (designate)
From India to	
Australia	Prince M. S. Duleepsinhji
Canada	(vacant)
Ceylon	(vacant)
Great Britain	V. K. Krishna Menon
Pakistan	(vacant)
From New Zealand to	
Australia	G. E. L. Alderton
Canada	Thomas Charles Atkinson Hislop
Great Britain	William Joseph Jordan
From Pakistan to	
Australia	Yusaf A. Haroon
Canada	Mohammad Ali
Great Britain	Habib Ibrahim Rahimtoola
India	Mohammad Ismail
From South Africa to	
Australia	Philippus Rudolph Viljoen
Canada	Alfred Adrian Roberts
Great Britain	Albertus Lourens Geyer
Southern Rhodesia	Terence Henry Eustace
From Southern Rhodesia to	
Great Britain	Kenneth M. Goodenough
South Africa	Anthony Drinkwater Chataway (designate)

* Resident Minister in London.



The state landau carrying the Indonesian ambassador, Subandrio, from his embassy to present his letters of credence to the King, March 23, 1950. This was the first time an ambassador had been driven in a landau since before World War II.

AMERICAN FEDERATION OF LABOUR:

see TRADE UNIONS.

AMERICAN LITERATURE.

The confusion and uncertainty in the United States in 1950 shaped the writing of the year. It was also a year of looking backward: there were a remarkable number of books devoted to scholarship in American history and novels which re-created historic figures or eras.

The reading public, however, responded to the new tensions by turning in great numbers to three controversial books. Gayelord Hauser's *Look Younger, Live Longer* promised peace of soul through yeast, yoghurt and hormones. L. R. Hubbard propounded a new science of mental health through special techniques of self-psychoanalysis in his *Dianetics*. Immanuel Velikovsky's *Worlds in Collision*, an explanation of ancient historic events in terms of two series of cosmic catastrophes, roused such a storm over its veracity and sincerity that its original publishers handed over the rights to another publishing house.

At the outbreak of war in Korea, many books on Asiatic politics and history appeared. Among them were George McCune's *Korea Today* and Owen Lattimore's *Pivot of Asia*, a study of the frontiers of China and Russia. Two other books on Asia were Foster Bowman Hailey's *Half of One World* and Bruno Lasker's *Human Bondage in Southeast Asia*.

The stream of books about World War II continued. They included Frank Howley's *Berlin Command* and Lucius Clay's *Decision in Germany*. Mark Clark told the inside story of the Italian campaign in *Calculated Risk*, Robert L. Eichelberger that of the ground war in the Pacific in *Our Jungle Road to Tokyo*. Admiral William D. Leahy, in *I Was There*, reported on his personal observations at the Cairo, Tehran, Yalta and Potsdam meetings.

A flood of books documented the country's confusion with regard to loyalty, security and freedom of speech. Walter Gellhorn's *Security, Loyalty, and Science* analysed the dangers to scientific workers of the screening process. Carey McWilliams, in *Witch Hunt*, related the present purges to similar episodes in history. Nathaniel Weyl wrote *Treason*, a survey of disloyalty and betrayal in American history up to the Hiss case. Two books dealt with the Hiss trial: Ralph de Toledano and Victor Lasky, in *Seeds of Treason*, defended the proposition that Hiss had betrayed his country; Alistair Cooke, a British reporter who covered the trial, wrote *A Generation on Trial* as an objective study of the facts and issues. Haywood Patterson's *Scottsboro Boy* told the story of an earlier trial and prison terrors.

Two collections of Roosevelt documents appeared: *F.D.R.: His Personal Letters, 1929-1945*, edited by Elliott Roosevelt, and *The Public Papers and Addresses of Franklin D. Roosevelt*, compiled by Samuel I. Roseman. John Gunther's popular *Roosevelt in Retrospect* attempted an appraisal of the president.

Five volumes appeared in the series *Chronicles of America*, edited by Allan Nevins: *The Era of Franklin D. Roosevelt*, by Denis William Brogan; *From Versailles to the New Deal*, by Harold Underwood Faulkner; *The New Deal and World Affairs (1933-1945)*, by Allan Nevins; *The United States in a Chaotic World (1918-1933)*, by Allan Nevins; and *War for the World*, by Fletcher Pratt.

Other historical works for the general reader included: Carl Van Doren's *Jane Mecom*, a biography of Benjamin Franklin's sister; Catherine Drinker Bowen's *John Adams and the American Revolution*; Irving Brant's *James Madison, Father of the Constitution, 1787-1800*, the third volume of a series, and Margaret L. Coit's *John C. Calhoun, American Portrait*, excellent for its picture of the times.

A large group of books appeared on psychoanalysis. Erich Fromm's *Psychoanalysis and Religion* advanced the belief that both can work together for the saving of man's soul. Karen Horney's *Neurosis and Human Growth* presented her positive approach to psychoanalytic therapy. There were also *Psychosomatic Medicine* by Franz Alexander and *Psychoanalysis: Evolution and Development* by Clara Thompson and Patrick Mullahy.

Fiction. Although some good new novels appeared in 1950, there were no striking developments in fiction and the quality of lesser novels was undistinguished. Ernest Hemingway's *Across the River and Into the Trees*, the story of an ageing colonel, his loves, memories, opinions and manner of dying, was immoderately praised and damned; the condemnation arose not so much from the book itself as from the critics' conception of Hemingway's personality and prejudices. Many other novels portrayed characters involved in special settings or with special problems, the most distinguished being John Hersey's *The Wall*, about the Warsaw ghetto under Nazi persecution. James Aldridge, in *The Diplomat*, wrote the story of the political awakening of a young man attached to a distinguished empire-building British diplomat. William L. Shirer, turning for the first time to fiction, used his knowledge of Germany in *The Traitor*, a character study of a renegade. Ned Calmer's *The Strange Land* was one of the few novels directly using the war. Henry Morton Robinson's *The Cardinal*, a best-seller, the story of a Catholic priest, showed the workings of the church. Arthur Gordon's *Reprisal* was a story of a Georgia lynching. Michael Amrine, in *Secret*, portrayed a physicist with a conscience about the atom bomb. Two writers who chose a background of South American politics, plots and revolutions were Robert Pick with his *Guests of Don Lorenzo* and Gore Vidal with his *Dark Green, Bright Red.* Upton Sinclair wrote *Another Pamela; or Virtue Still Rewarded*, a review of contemporary social history. Budd Schulberg's *The Disenchanted* ranked among the top books of the year. Based partly on the life of F. Scott Fitzgerald, it was a solid, mature treatment of a man's struggle with and for success.

The number of historical romances was slightly smaller than usual this year. Thomas B. Costain's *Son of a Hundred Kings*, a novel of the 1890s in Canada, was a best-seller. Samuel Shellabarger used a 16th-century French setting for *The King's Cavalier.* Nancy Hale's *The Sign of Jonah* was one of the better panoramic historical novels.

The psychiatric novel and the novel of character, still important, were exemplified in Brendan Gill's *The Trouble of One House*, Nancy Wilson Ross's *I, My Ancestor*, Susan Yorke's *The Widow* and Laura Z. Hobson's *The Other Father.* The playwright Tennessee Williams ventured into the field of fiction with *The Roman Spring of Mrs. Stone.* Erskine Caldwell published *Episode in Palmetto.*

Short stories gave a much richer relative yield than novels. *The Collected Stories* of William Faulkner (*q.v.*) headed the list. Faulkner's long-held position as an eminent American writer was confirmed by the award to him of the 1949 Nobel prize for literature. The stories in Paul Bowles' *The Delicate Prey* were of violence and death in an African setting. Mary McCarthy collected her sharply satirical pieces in *Cast a Cold Eye.* Walter Van Tilburg Clark's Western stories, *The Watchful God and Other Stories*, were too often marred by heavy symbolism. Irwin Shaw's *Mixed Company* was a group of neatly told stories often concerned with the impact of World War II. The stories in William Carlos Williams *Make Light of It* were sketches of character. Other volumes of stories were James T. Farrell's occasionally sharp group on *An American Dream Girl*, Charles Jackson's *The Sunnier Side* and Jesse Stuart's Kentucky stories, *Clearing in the Sky.*

Belles Lettres. Perhaps the most original contribution of the year was Henry Nash Smith's *Virgin Land*, a study of the West as myth and symbol in American history and literature. Henry Steele Commager in *The American Mind (1880-1950)* contributed on the whole the best survey of American thought since the classic work of Parrington. Lionel Trilling, in *The Liberal Imagination*, collected his influential essays on literature and society.

Of the studies of classical figures, several were about Herman Melville. Most important was Newton Arvin's addition to the *American Men of Letters Series, Herman Melville*, the best critical survey of his work. Another was M. O. Perceval's *A Reading of Moby Dick.* Another title in the distinguished new *American Men of Letters* was John Berryman's *Stephen Crane.* Two books on Mark Twain appeared: Kenneth R. Andrews' *Nook Farm: Mark Twain's Hartford Circle* and Gladys C. Bellamy's *Mark Twain as a Literary Artist.* Other biographies were Lloyd Morris' *William James* and Louise Hall Tharp's highly readable *The Peabody Sisters of Salem.*

Some of the critical works on contemporary writers were *William Carlos Williams* by Vivienne Koch, *The Shaping Spirit: A Study of Wallace Stevens* by William Van O'Connor and *The Art of T. S. Eliot* by Helen Gardner. Edgar Kemler's sympathetic biography, *The Irreverent Mr. Mencken*, reviewed the era as well as the subject.

A volume of great historical value and of interest in view of the controversy about the 1949 Bollingen prize was *The Letters of Ezra Pound 1907-1941*, edited by D. D. Paige. Kenneth Burke, the most philosophical of the new critics, wrote *A Rhetoric of Motives;* and Edmund Wilson collected in *Classics and Commercials* his often brilliant critical essays.

Poetry. The year 1950 saw the deaths of several distinguished literary figures: F. O. Mathiessen; John Gould Fletcher; William Rose Benét; Carl Van Doren; Edna St. Vincent Millay; and Edgar Lee Masters (for the last two *see* OBITUARIES).

Mathiessen's new edition of the *Oxford Book of American Verse* appeared, in general an excellent selection. Carl Sandburg, with the publication of *Complete Poems*, announced the end of his career as a poet. Conrad Aiken revised his "symphonic poems" and published them in *The Divine Pilgrim.* William Carlos Williams gathered together *The Collected Later Poems.* Wallace Stevens wrote *The Auroras of Autumn* and received the Bollingen Award. E. E. Cummings wrote XAIPE, 71 new poems, and also won the Academy of American Poets' fellowship. (*See* also LITERARY PRIZES.)

(H. M. H.)

ANAEMIA. The treatment of special anaemias due to changes in red blood cells received much attention during

1950 and the effectiveness of vitamin B_{12} was the subject of many reports. One microgram a day of vitamin B_{12} to patients with pernicious anaemia was confirmed as valuable. Vitamin B_{12b} was also useful. These substances were of especial value in patients sensitive to liver extract, and in those with neurological involvement. The medication was most effective when given by injection, but oral administration could be enhanced by potentiators such as stomach or duodenal mucosa, folic acid or gastric juice from normal people. The blood-producing effect of gastric juice concentrate or beef muscle extract was found to be proportional to their vitamin B_{12} content. Folic acid and vitamin B_{12} were found to be synthesized in relatively large amounts in the large intestine, even in patients with pernicious anaemia. The vitamin was not effective in the treatment of large cell anaemia of pregnancy in ordinary doses although folic acid or large doses of vitamin B_{12} caused an adequate improvement. There appeared to be a relation between folic acid, folinic acid and the *Leuconostoc citrovorum* factor, and the possibility was suggested that folic acid, liver extract and vitamin B_{12} were essential to the formation of nucleic acid and nucleoprotein through a chemical chain reaction.

Monkeys deficient in folic acid failed to become anaemic when they were supplied with sufficient quantities of ascorbic acid, but folic acid deficiency anaemia responded only to folic acid. This substance while producing an improvement in the blood in pernicious anaemia did not check or prevent the neurological symptoms. Vitamin B_{12}, however, was effective in reversing these complications. Folic acid was not harmful to the central nervous system when used in the treatment of other types of anaemia.

Patients with pernicious anaemia had a special predisposition to cancer of the stomach, the rate being three times that expected of a corresponding age group and more than six times as frequent as in a group showing achlorhydria or hypochlorhydria.

A heat-labile haemolytic factor, resembling serum coagulation accelerator, was present in the plasma of patients with paroxysmal nocturnal haemoglobinuria as an inert precursor which could be activated by thrombin. The haemolysis was inhibited by dicumarol.

The relationship of sensitization of Rh-negative women received much attention. Besides the development of erythroblastotic infants who were Rh-positive in mothers sensitized from the infant, examples of the development of antibodies were described after blood transfusion and subcutaneous haemotherapy. The occurrence of erythroblastosis in one of a set of twins was reported.

Erythroblastosis foetalis was treated by replacement transfusions, counter-sensitization with bacterial vaccines and with hapten (extract of Rh-positive red blood cells). While results were sometimes encouraging in individual patients, the effects were, as a whole, poor. Erythroblastosis was prevented in some patients by the treatment of the mother with vitamin K and anhydro-hydroxy-progesterone. Good results were noted in one series of cases after the transfusion of 50 to 60 c.c. of sedimented red blood cells. The results of treatment with exchange transfusions varied; some workers reported cures whereas others had a high death rate.

The concentration of anti-A and anti-B substances in the blood of group O (universal) donors was reduced to safe levels for use in treating anaemia by the addition of substances isolated from animal stomach linings. Otherwise severe haemolytic anaemia developed in some patients. Some reactions were prevented by the use of washed red blood cells instead of whole blood. At high altitude during an aeroplane trip sudden enlargement of the spleen, with heart complications, was noted in a patient with sicklaemia. Anaemia was noted in 14% of the people in middle Tennessee.

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(R. Is.)

ANAESTHESIOLOGY. During 1950 it became apparent that certain specially prepared synthetic salts, such as methyl iodide and methyl chloride of curare, had no apparent advantages over the standard *d*-tubocurarine that had become almost a standard agent in a solution of 3 mg. per c.c. Curare possessed an advantage over decamethonium bromide, or C-10, with the trade name of Syncurine, in that an antidote for curare was available, whereas there was none for Syncurine. Previously, prostigmine had been fairly effective as an antidote for curare, but by the middle of 1950 an agent, an analogue of prostigmine (Hoffmann-LaRoche, Inc.) was found to be very effective in increasing the volume of respiration when undesired depression had developed from the use of curare. In the field of shock therapy dextran, gelatin and periston showed themselves to be valuable.

The so-called pain clinics in the U.S increased in number; each clinic showed an increase during the year in the number of patients treated. Refinement in technique was achieved, so that the use of roentgenograms which showed that the needles had been properly placed had become almost essential in most instances of nerve block. Measurements of skin temperature and skin resistance to electric current proved to be very informative as to the effectiveness of blocks that were done and of subsequent operations in which nerves had been sectioned.

Albert Faulconer, Jr., invented a device which enabled the intermittent intravenous administration of solution of pentothal sodium solution to be automatically controlled by measuring the minute volume of respiration. The meter of the device became useful in the measurement of respiratory depression caused by curare and the effect of the various antidotes used to abate such depression. It was found to be useful in the post-anaesthesia observation room in helping to estimate the patient's condition as anaesthesia became light or disappeared. (*See* also SURGERY; ELECTRONICS.)

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(J. S. L.)

ANDORRA. A small autonomous principality between France and Spain, bounded on the N. by the *départements* of Ariège and Pyrénées Orientales, and on the S. by the Spanish province of Lerida. Area: 191 sq. mi. Pop. (1950 est.): 5,400. Language: Catalan. Religion: Roman Catholic. Capital: Andorra-la-Vieja (pop., 1950 est, 980). Co-princes: the president of the French republic and the bishop of Urgel, Spain, respectively represented in 1950 by André Bertrand and Jaime Sansa Nequi, their *viguiers*. An elected General Council of 24 members appoints one of its members as the *syndic général des vallées* (from 1946, Francisco Cayrat).

The event of the year was the reduction from 100 to 60

of the French *gardes mobiles* which were stationed from autumn 1944 on Andorran territory for the purpose of maintaining order.

On Feb. 2 the Paris Tribunal des Conflits declared null and void the order of a Paris court given on March 8, 1949, to the Radiodiffusion Française to cease jamming the broadcasts of Radio Andorra. However, the Andorran broadcasts were not jammed during the year.

ANGLICAN COMMUNION. The Church of South India was the leading topic of discussion and negotiation within the Anglican communion in 1950. In January the Church of India, Burma and Ceylon urged that the doctrinal position of the Church of South India should be clarified in accordance with the resolutions of the Lambeth conference (1948). In the meantime former Anglican clergy now belonging to the Church of South India might function only in Anglican churches when visiting North India. Lay people from South India were to receive communion in North India, with the permission of the bishop, only if their confirmation had been adequate; other communicants of the Church of South India might receive communion on the principle of " economy."

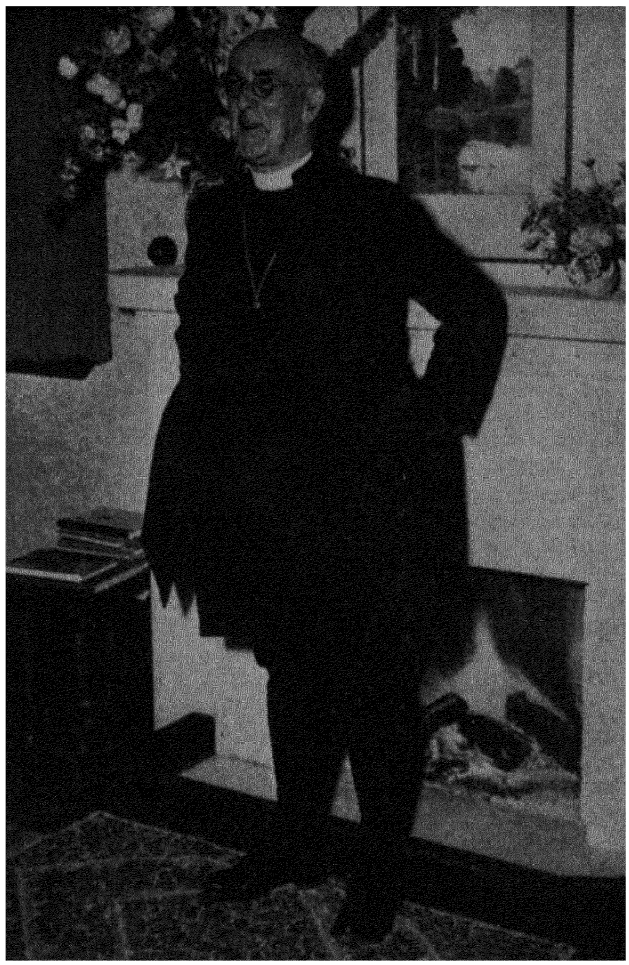
The report of the joint committee of the convocations of Canterbury and York on relations with the Church of South India was issued. Though fully satisfied with the credal orthodoxy of the Church of South India and with its sacraments, confirmation service and synodal procedure, it expressed the hope that all its ministers would have been episcopally ordained at the end of 30 years: till this had been accomplished full inter-communion could not take place, but the question of the recognition of the South Indian ministry was to be reconsidered in five years' time. Suggestions were made for the reception of bishops, clergy and laity of the Church of South India when in England and of members of the Church of England when in South India. Celebration of the Holy Communion by bishops of the Church of South India, when in England, was left to the discretion of the diocesan bishops.

The Church of South India published an interim reply to the six questions raised by the Lambeth conference (1948) and a reply to questions on faith and order raised by the joint committee of the convocations of Canterbury and York. The Church of India, Burma and Ceylon agreed to appoint a bishop as commissary of the metropolitan for the Anglicans in Nandyal who were standing out of the Church of South India.

The endowment funds of the bishoprics of Tinnevelly and Dornakal, supplied by the S.P.C.K. and S.P.G., were returned to those societies, under the judgment of Mr. Justice Vaisey (Dec. 1949); and a scheme was arranged whereby similar funds, supplied by the Colonial Bishoprics fund, were made available for bishoprics in North India. Bishop Aurobindo Nath Mukerji of Delhi was elected metropolitan of India and bishop of Calcutta in succession to the Right Rev. G. C. Hubback who had retired. Canon John Richardson was consecrated first bishop of the Nicobar Islands.

The South African Church continued its opposition to the colour bar in South Africa, not only in church circles but as a principle to be observed generally by the British community in South Africa. Bishop Stephen Neill conducted a three months' tour of the churches in Africa. A conference of East African bishops proposed a new province for Central Africa consisting of the dioceses of Nyasaland, Northern Rhodesia and Southern Rhodesia. The Rev. J. A. A. Maund, rector of Pretoria, was consecrated bishop of the new see of Basutoland.

Early in the year the bishop of Chichester, the Right Rev. G. K. A. Bell, toured Australia, New Zealand and India on behalf of the World Council of Churches. A church at Matakohe, North Auckland, built by the New Zealand government, was dedicated in memory of J. G. Coates (prime minister, 1925-28). The archbishop of Canterbury (*q.v.*) (Dr. Geoffrey Fisher) at the end of the year toured Australia, Tasmania and New Zealand. Two centenaries were celebrated during this visit: that of the Australian Board of Missions and that of the foundation of the Anglican Church at Canterbury, New Zealand. The diocese of Carpentaria, Australia, celebrated its 50th anniversary. The erection of a new cathedral at Suva, Fiji, was begun. Bishop Yashira of Kobe toured the Anglican churches in the United States, Canada, Manila, the Philippines and Australia and testified to the cordial welcome given to him by people who had suffered at the hands of the Japanese in World War II.



Dr. Geoffrey Fisher, Archbishop of Canterbury, seen in Bishopscourt, Ballarat, Victoria, during his visit to Australia in 1950.

The bishop of Fulham, the Right Rev. G. E. Ingle, began a series of tours of the Anglican churches in northern and central Europe. In July he was in Moscow. He held a conference of European chaplains at Amsterdam attended by the bishop of London, the Right Rev. J. W. C. Wand. The archbishop of Wales, the Most Rev. John Morgan, was requested by the governing body of the Church in Wales to set up a commission for the reform of the Welsh prayer book. It was decided to use a sum of £30,000, bequeathed in order that a tower might be added to the cathedral at Bangor, for other purposes connected with the cathedral. The synod of the Church of Ireland inaugurated negotiations for inter-communion with the Old Catholic Church of the Netherlands. (*See* CHURCH OF ENGLAND; MISSIONS, FOREIGN RELIGIOUS; THEOLOGY; WORLD COUNCIL OF CHURCHES.) (A. J. MAC.)

ANGLING. Rough weather during much of the year handicapped sea anglers, tunny catches being especially affected; but although the total was well below that of 1949 one angler opened the season remarkably well by getting five tunny in two trips, averaging over 600 lb. apiece. In August a record brill of 16 lb. was caught at St. Johns, Isle of Man. Among the coast-town festivals Looe was again prominent, notable captures there including skate of 103 lb., bass of 13 lb. and pollack of 14 lb., besides a number of blue sharks (of which two anglers took 11 in one day). The Dover club's annual camping week on the breakwater, with all-night fishing, produced a total of 754 fish weighing 579 lb., including several good bass. At Bournemouth two trigger-fish were caught—rare visitors to British waters.

Two new fresh-water records during the year were a grayling of 7 lb. 2 oz. (R. Melgum) and a tench of 8½ lb. caught in the Leicester canal. The annual all-England contest, fished at Peterborough in September, produced good weights, the local association winning with 62½ lb.

A proposal to introduce a large Indian species to British rivers was turned down in view of the risk to indigenous species.

The Angler's Co-operative association, formed to combat pollution of rivers, added several more to its list of successful actions during the year. (D. F. KY.)

ANGLO-EGYPTIAN SUDAN. Territory in north-east Africa under the joint sovereignty of Great Britain and Egypt. Area: 967,500 sq.mi. Pop. (no census ever taken, 1948 est.): 7,547,500. Language: English, Arabic, and various Nilotic and Negro tribal dialects in the south. Religion: Arabic minority is Moslem; the bulk of the Negro population is heathen; only *c.* 20% of population in the south is Christian. Chief towns (1948 est.): Khartoum (cap., 71,400); Omdurman (125,300); El Obeid (70,100); Wad Medani (57,300); Port Sudan (47,000). Governor general, Sir Robert George Howe; leader of the Legislative Assembly, Miralai Abdullah Bey Khalil.

History. The differences between Great Britain and Egypt about the future of the Sudan remained unsolved and were the subject of renewed political excitement in Egypt towards the end of the year. This dispute continued to have its effect upon the internal political life of the country, yet it could be said that the year was one of progress towards the government's declared object—the Sudanization and independence of the Sudan. In his report on local government, which had been called for in 1949, A. H. Marshall made proposals for drastic changes in policy, involving the creation of single local authorities for all purposes, financially independent and answerable to the local electors. The executive council accepted the proposals in principle and laid them before the Sudan Legislative Assembly, which thereon approved what amounted to the replacement of the Egyptian (and originally French) system by an English one.

The ministers of health and agriculture announced five-year plans, but the most notable developments were in the field of education. The minister, Abdurrahman Ali Taha, stated that his department planned to extend elementary education to cover two-fifths of the children of school age in the northern Sudan within a decade. This would involve the opening of new centres for the training of teachers and the increasing of the number of boys' elementary schools in the area from 156 to 356 and of girls' schools from 101 to 211. The third government secondary school, opened at El Obeid in January with accommodation for 480 boarders, was under the charge of the first Sudanese headmaster in history. Less happily, there were signs of the spread to the Sudan of student strikes, familiar in Egypt and elsewhere, although these were on a much smaller scale than in the preceding autumn.

A potentially serious source of Sudanese disunity was the difference between the Moslem, Arabic-speaking and advanced north and the more backward and still largely pagan Negro south. The considerable activities of Christian European missionaries in the south led to assertions that Islam and Arabic were being handicapped. The minister of education announced that 18 northern officials were to be sent to further the spread of Arabic in the south, while southern requests for English programmes from the Omdurman radio station were not acceded to.

National feeling showed itself in debates on the Sudan defence force, although it was made clear that Sudanization had progressed so far that there were in 1950 only 40 British officers, as against 69 in 1939. On June 30 the Sudan Plantations syndicate was wound up, and the Gezira scheme came under nationalized control. This was the occasion of what must be regarded as the most striking feature of the events of the year because, when a British member of the executive council was appointed to its management, he was replaced by a Sudanese, thereby giving rise to a Sudanese majority (7 Sudanese as against 5 British members) on that body. The Legislative Assembly debated the future of Gezira and important reforms in land registration were undertaken. In December considerable excitement was caused by a debate on a motion in the Legislative Assembly in favour of the immediate independence of the country, which was defeated by one vote. (H. S. D.)

Education. (1949) *Northern System.* Government schools: elementary 249, pupils 35,613; sub-grade and Koran 544, pupils 38,550; intermediate 17, pupils 2,568; secondary 5, pupils 1,045; technical 2, pupils 312; teachers' training colleges 5, teachers trained annually 245. Non-government schools 60, pupils 14,791. University education at Gordon Memorial college, higher education at Kitchener School of Medicine. *Southern System.* Schools: elementary 3, pupils 291; intermediate 1, pupils 150; secondary 2; pupils at mission schools 20,669.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): cotton seed 106 (110); cotton, ginned 56 (55); sesame seed (1947) 141·2; gum arabic (1947) 37; groundnuts (1947) 20; dates (1947) 46. Livestock ('000 head, Jan. 1948): cattle 3,500; sheep 5,500; camels 1,500.

Foreign Trade. (£E million, 1949; 1950, six months, in brackets) import 23·9 (13·9); export 27·4 (17·2). Main sources of imports (1949): U.K. 32%; Egypt 16%. Main destination of exports: U.K. 65%; Egypt 10%. Main imports: cotton piece-goods 18%; sugar, coffee, tea 14%; coal, oil fuel and petrol 0·5%. Main exports: raw cotton 69%; livestock 10%; gum 0·6%.

Transport and Communications. Railways (1949): 2,013 mi. Licensed motor vehicles (Dec. 1949): cars 2,600; commercial 3,300. Telephone subscribers (1949): 3,520. Wireless licences (1949): 3,227.

Finance and Banking. (£E million) budget (1949 actual) revenue 18·7, expenditure 11·6; (18 months 1950-51 est.) revenue 28·7, expenditure 21·1. Total external debt (Dec. 1948) 12·8, of which 5·4 to Egypt for development. Monetary unit: Egyptian *pound* with an exchange rate of £E 0·975 to the pound sterling and £E 0·348 to the U.S. dollar.

ANGOLA: *see* PORTUGUESE COLONIAL EMPIRE.

ANNAM: *see* INDO-CHINA.

ANTARCTICA. The considerable activities of various countries in the Antarctic regions during recent years were maintained in 1950.

Falkland Islands Dependencies Survey. The Falkland Islands Dependencies survey in its seventh consecutive year established a new base at Rytviken, South Georgia, and maintained its other bases with the exception of that on Stonington Island, Marguerite bay. In 1949 relief of the Stonington Island base proved impossible owing to the failure of the sea ice to break up. Dr. V. E. Fuchs with 10 companions had therefore to remain in the south for an additional year. The final sledge journey of 1,080 mi. lasted 90 days, the party returning to base shortly before reconnaissance flying began from the northern bases. With the first appearance of open water those men who had spent three consecutive winters in the south were flown out in a

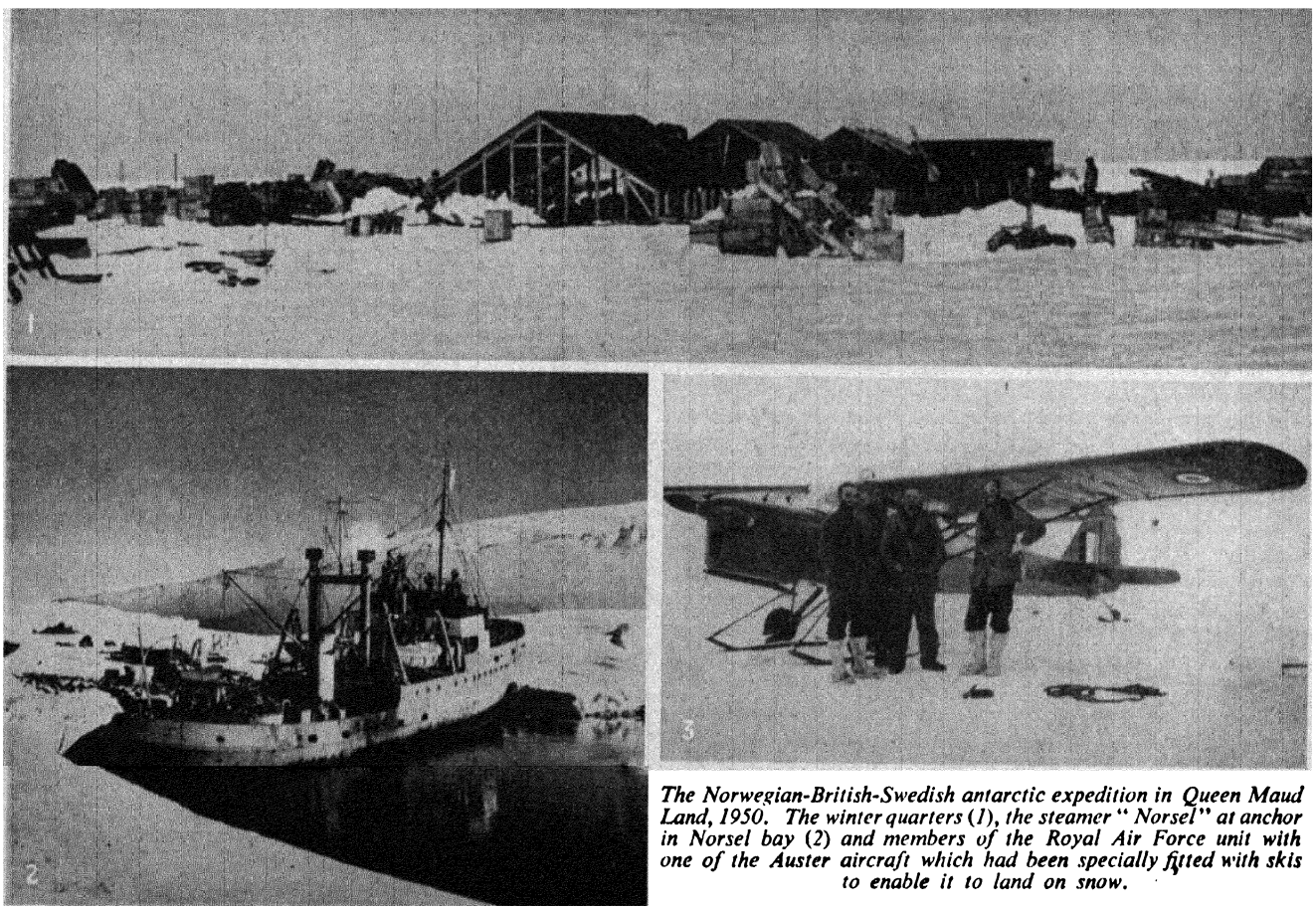
Norseman seaplane. On Feb. 12 the survey's ship " John Biscoe " brought out the rest of the party together with their dogs, specimens, records and much equipment. The base remained closed for the time being. The new base at Rytviken would carry out a survey and study of the biology of the elephant seal population of South Georgia during 1951. This would be co-ordinated with the work already done in the South Orkneys.

The International Norwegian-British-Swedish Expedition. This expedition met with considerable difficulty in effecting a landing on the Queen Maud Land coast, guarded as it is by a barrier of 100-ft.-high ice cliffs. The expedition was accompanied by two Auster float planes, operated by an R.A.F. party under Squadron Leader B. Walford. Reconnaissance by these planes finally located a single break in the barrier cliffs allowing access to the hinterland in the vicinity of Cape Norvegia (Lat. 71°03′S.; Long. 10°54′W.). There the expedition leader, Capt. J. Giaever, established his base well back from the ice cliffs, using " weasels " (light, tracked carriers) and trailers to transport huts, stores and equipment. The base which lay more than 100 mi. from the nearest rock outcrop had been named " Maudheim." At the end of the winter a sledge party using both dogs and " weasels " reconnoitred a route for nearly 200 mi. to the south. During the summer it was hoped to use this route for exploration of the ice-free mountain area first seen and photographed from the air by the German " Schwabenland " expedition of 1938. The R.A.F. party and the aircraft returned to England on board the expedition's 700-ton vessel " Norsel." In Nov. 1950 the ship again left Norway for the south carrying stores and equipment for the expedition which would remain in the field for another year.

French Adélie Land Expedition. Under the command of André Liotard, this expedition failed to penetrate the ice in 1949, but in 1950 succeeded in reaching the mainland on Jan. 18. A base was established on a low rocky point along the coast. This was the first French expedition to Adélie Land since Dumont d'Urville discovered that coast in 1840. The first party to land there was Douglas Mawson's Australian expedition in 1913. The present expedition's ship, " Commandant Charcot," named after the great French explorer, departed on Feb. 3, after putting down two years' supplies. The main subjects of study were geography, geology, hydrography and meteorology. The expedition was equipped with a four-seater Stinson aircraft and two " weasels," with over 30 sledge dogs in addition. Adélie Land lies between 136° and 142°E. longitude and extends from the Antarctic circle to the pole.

Other Work in the Antarctic. The work of the Australian National Antarctic Research expedition on Heard and Macquarie Islands, having been in progress for three years, continued under the command of its leader, Phillip C. Law. In 1950 equipment was landed at Macquarie Island for cosmic ray work and for maintaining ionospheric, geomagnetic and seismographic records. The Argentine and Chilean governments maintained the bases which they set up within the Falkland Islands Dependencies sector. It was reported that on Oct. 15 the Argentine supply ship, " Ernesto Tornquist," ran aground on Cape Constance, South Georgia. Some 250 persons on board were taken off by whale catchers from Grytviken.

During the last season the pelagic whaling fleet and shore-based whalers of various nationalities continued operations with satisfactory results under the conditions laid down by the Washington convention of 1946. It was expected that the U.S.S.R. would again despatch a whale factory ship and catchers to the Antarctic in 1950. (*See* also EXPLORATION AND DISCOVERY.) (V. E. F.)



The Norwegian-British-Swedish antarctic expedition in Queen Maud Land, 1950. The winter quarters (1), the steamer " Norsel " at anchor in Norsel bay (2) and members of the Royal Air Force unit with one of the Auster aircraft which had been specially fitted with skis to enable it to land on snow.

ANTHROPOLOGY. The third session of the International Congress of Prehistoric and Protohistoric Sciences met at Zürich in August; its work was divided among six sections and 96 papers were read. An invitation to hold the fourth session in Spain in 1954 was accepted. The seventh International Congress for the History of Religions met in Amsterdam in September; the theme of the congress had been announced as the discussion of a myth and ritual pattern in civilization and in primitive society, but many other topics were included. Relations of the Congress with the United Nations Educational, Scientific and Cultural organization (U.N.E.S.C.O.) came under review and it was decided to establish an international organization to promote the study of the history of religion under the auspices of the Conseil International de la Philosophie et des Sciences Humaines (of U.N.E.S.C.O.). It was hoped that the eighth congress would meet in Rome in 1955 (see *Man*, 1950, London).

The International Anatomical congress met at Oxford in July under the presidency of Professor W. E. Le Gros Clark, and was attended by over 500 members from 56 countries. Three sessions were devoted to physical anthropology and about 20 communications presented. Several papers were concerned with the fossil remains excavated in Africa; Professor S. Zuckerman (Birmingham) claimed that *Australopithecinae* could not be classified as more hominid than ape while Professor Le Gros Clark differed. L. S. B. Leakey (Nairobi), on whom Oxford university conferred the degree of doctor of science *honoris causa*, described the environmental background associated with his finds of Early Miocene fossil primates. Later, in collaboration with Professor Le Gros Clark, he delivered an address to the Royal Anthropological institute on the Miocene apes of Kenya. Racial differentiation in modern man, climatic adaptation and human phylogeny, blood grouping and many other special studies were discussed (*see* report in *Man*, 1950, 237).

Research into the antiquity of man was continued during the year, and a notable discovery of two large skulls, excavated by R. Broom in the Transvaal, was reported; a full description was expected. Professor D. A. E. Garrod (Cambridge) addressed the Royal Anthropological institute on the excavation of an early Magdalenian rock shelter at Angles-sur-l'Anglin, Vienne, France, and showed a representation of the life-size naturalistic portrait of an Old Stone Age man discovered there (" Angles Man ").

An important event in east Africa was the establishment at Makerere college, Uganda, of the East African Institute of Social Research with Audrey I. Richards, distinguished as an anthropologist, as the first director. The functions of the institute were announced as the establishment of a centre for the extension of knowledge of the cultures and languages of the peoples of east Africa and their reactions to modern conditions and policies; the conduct of field studies; cooperation with similar institutions; the organization of studies of administrative importance for government; the training of research workers; and the accumulation and publication of data.

An Institute of the Desert (Institut Fouad 1er du Desert) was established in Egypt at Heliopolis with a comprehensive programme providing for the study of all aspects, past and present, of the desert; a library and museum and field and experimental work in all sections were planned.

A Norwegian traveller, Thor Heyerdahl, published a popular account, *The Kon-Tiki Expedition by Raft across the Pacific* (London, 1950), of his adventure in sailing a steerable raft of green balsa logs for 4,300 mi. from Peru to Tuamotu along the south equatorial current; he claimed that this was a line of migration to Polynesia about A.D. 500 and 1100. The argument was received with interest and the further publication of scientific data was awaited.

Race was the subject of a statement by U.N.E.S.C.O. summarizing the findings of a panel of scientists (see *The Times*, July 16, 1950). The panel was asked to define the concept of race and to summarize established scientific facts: the seven-point statement issued laid down that racial discrimination had no foundation in biological fact; that the range of mental capacities in all races was about the same, there being no evidence of innate qualitative differences; that there was no evidence that race hybridization produced biologically bad results, social difficulties being attributable to social and cultural factors; that race was less a biological fact than a social myth; that scientifically no modern national or religious group was a race, nor was a linguistic, geographic or cultural community a race; that tests had shown an essential similarity in mental characters among racial groups; and, lastly, that all human beings possessed educability and adaptability.

The British Association of the Advancement of Science held its annual meeting at Birmingham. Redcliffe N. Salaman, (president, section H, anthropology and archaeology) spoke on the influence of food plants on social structure; he used the potato as his example but called for investigation into the influence of other food plants. The concept of culture was discussed from several angles by Phyllis Kaberry (London), Glyn Daniel (Cambridge) and Professor M. Fortes (Cambridge). Advances were also reported in the knowledge of blood groups and their uses in anthropology; further reports were also made on the dating of fossil remains by fluorine tests. R. E. M. Wheeler reported the discovery of a platform for unloading grain at Mohenjodaro; silting alongside had reduced its value, and decline culminated in a massacre about 1500 B.C., the period usually assigned to the Vedic-Aryan invasions of India. In Southern Rhodesia a new site was found with resemblances to Zimbabwe, which, it was hoped, would throw light on the history of mediaeval south Africa. At Heliopolis a cemetery was opened up: four watch dogs buried at the edge were uncovered, then graves with offerings of small gazelles, then a row of burials of men about 1·8 m. in height, probably immigrants, and lastly, a row of burials of small women, apparently indigenous; the cemetery was thought to be later than that excavated at Maadi, but both were considered earlier than the great cemetery of the 1st and 2nd dynasty at Helwan.

A scientific expedition from Oxford visited southern Tunisia during the summer; among its members was Julek Slaski, a social anthropologist, who studied Berber marriage customs and also the troglodyte settlements at Matmata.

Professor J. H. Hutton was succeeded as William Wyse professor of social anthropology at Cambridge university by M. Fortes; S. F. Nadel left King's college Newcastle-upon-Tyne (Durham university) to become professor at the Australian National university at Canberra and R. O'R. Piddington left Edinburgh to become professor at Auckland University college, New Zealand; R. von Heine-Geldern returned to Austria on appointment to a chair in the University of Vienna.

The annual Huxley Memorial lecture of the Royal Anthropological institute was delivered by Julian Huxley on " New Wine for New Bottles: Ideology and Scientific Knowledge "; the bi-annual Henry Myers lecture of the same institute was delivered by Professor E. O. James, on " Religion and Reality," and Professor E. E. Evans-Pritchard, president of the institute, delivered the Marett lecture at Oxford on " Social Anthropology: Past and Present." (S. F. SN.)

New anthropological journals included *L'Homme: Cahiers d'ethnologie, de géographie et de linguistique*, issued by the Ecole Pratique des Hautes Etudes of the Sorbonne and edited by Claude Lévi-Strauss, Emile Benveniste and Pierre Gourou; and *Homo, Zeitschrift für die vergleichende Forschung am*

Menschen, under the editorship of Egon von Eickstedt. The latter journal, which was to appear quarterly, would continue the tradition and international character of the earlier *Zeitschrift für Rassenkunde*.

United States. A survey by Erminie W. Voegelin published in the *American Anthropologist* showed that during the period 1900-50 the number of institutions offering anthropology courses in the United States and Canada had grown from 11 to 304, while the teaching staffs, originally numbering 17, had increased to 604. In the United States, foreign area studies received further support from the Carnegie Corporation of New York which allotted additional funds to the Social Science Research council for area training fellowships. Yale, Harvard and the Universities of Iowa, North Carolina, Oklahoma and Washington joined in an organization known as the Human Relations Area Files, formerly the Cross-Cultural survey, established by George P. Murdock at Yale. An important contribution was Julian H. Steward's *Area Research: Theory and Practice*. The University of California at Los Angeles collaborated with the Commonwealth Serum laboratory of Victoria, Australia, in inaugurating a long-term genetical survey of the human populations of the Pacific area.

Problems of common interest to anthropology and genetics were discussed at a symposium on the Origin and Evolution of Man, held at the Biological laboratory, Cold Spring Harbor, N.Y. In *Genetics and the Races of Man*, William C. Boyd presented the first comprehensive statement of the role of genetics, and particularly the blood groups, in the variation and racial classification of man. It was pointed out by Chandler W. Rowe ("Genetics *v.* Physical Anthropology in Determining Racial Types," *Southwestern Journal of Anthropology*) that the genetical classification, no less than the anthropological, had its limitations and that the objectives of the two systems were not identical. A striking example of the importance of blood group studies for tracing population movements and relationships was an article in the *American Journal of Physical Anthropology*, "The ABO, MN, and Rh Blood Groups of the Basque People," by J. N. Marshall Chambers, Elizabeth W. Ikin and A. E. Mourant. A comparison of the blood group gene frequencies of the Basques with those of other Europeans led the authors to the conclusion that the present population of western and central Europe arose from the mixing of people akin to the Basques with later invaders from Asia. In *Races; a Study of the Problems of Race Formation in Man*, Carleton S. Coon, Stanley M. Garn and Joseph B. Birdsell emphasized the importance of environmental conditions in the development of phenotypic features characteristic of the various races.

The year 1950 brought new proof of the effectiveness of two recently discovered techniques for dating ancient skeletal and cultural materials—the fluorine and carbon-14 methods. The fluorine-dating method, described by Kenneth P. Oakley and C. Randall Hoskins in *Nature* ("New Evidence on the Antiquity of Man"), gave a decisive answer to the long disputed question of the age and faunal associations of *Eoanthropus*. Analysis of the fluorine content in these hominid and other mammalian fossils from the Piltdown gravel showed that all of the *Eoanthropus* specimens—teeth, skull and jaw fragments—were contemporaneous and that they belonged to the Upper or Middle instead of Lower Pleistocene, as formerly supposed. On the other hand the fluorine test confirmed the antiquity of the Swanscombe skull. The method of dating organic materials by means of radioactive carbon, which was developed during the past several years by W. F. Libby and J. R. Arnold of the University of Chicago Institute for Nuclear Studies, yielded fruitful results in 1950, when the first carbon-14 dates were officially announced. Of particular significance for American anthropology was the dating of the last glaciation as about 12,000 years ago and the demonstration that man was living in western North America at least as early as 8000 B.C. and at the southern tip of South America some 2,000 years later.

Problems of Alaskan archaeology, physical anthropology and ethnology were discussed by anthropologists from the United States and Canada at the Alaskan Science conference, held in Washington, D.C., Nov 9 to 11 under the auspices of the National Academy of Sciences and the National Research Council.

Columbia university inaugurated a programme for the study of contemporary cultures in the middle east and far east, beginning with a field project in India. Studies of the Chinese and Japanese segments of the population in Hawaii were made by Francis L. K. Hsu and Marvin K. Opler, respectively. Henry Field completed measurements of more than 2,000 individuals of different tribes in Iraq and Iran. Carleton S. Coon conducted archaeological and somatological work in Persia. Philip Drucker completed an ethnographic survey of the Marshall Islands for the U.S. naval administration.

A number of field investigations were conducted in the American Arctic. L. L. Hammerick, professor of Germanic philology at the University of Copenhagen, made linguistic studies on Nunivak Island, Alaska. William S. Laughlin and Frederica de Laguna continued their research programme in the Aleutian Islands and in the Tlingit area of southeast Alaska, respectively. Viola Garfield collected data on northwest coast Indian art and Douglas Leechman worked among the Athabaskan Indians in the interior. J. L. Giddings, Jr., and Helge Larsen, joined by F. G. Rainey, continued their investigation of pre-Eskimo remains on Seward peninsula and the Bering sea coast. On Cornwallis Island in the Canadian arctic H. B. Collins and W E. Taylor found evidence of three periods of occupation—Dorset, early Thule and late Thule.

Gordon R. Willey was appointed Bowdich professor of Mexican and Central American archaeology and ethnology at Harvard, and Alfred Metraux became head of the United Nations Educational, Scientific and Cultural organization's division for the study of race relations. The Viking fund medalists for 1950 were George P. Murdock, general anthropology, William K. Gregory, physical anthropology, and Hallam L. Movius, archaeology.

A second edition of the *International Directory of Anthropologists*, edited by Melville J. Herskovits, was issued by the Committee on International Relations in Anthropology of the National Research council. Important publications that appeared in 1950 included volume 6 of the Bureau of American Ethnology's *Handbook of South American Indians*, edited by Julian H. Steward; *Man in the Primitive World: An Introduction to Anthropology*, by E. Adamson Hoebel; *An Introduction to Social Anthropology*, by Ralph Piddington; *Anthropology, the Science of Human Society and Culture*, by J. S. Slotkin. (H. B. Cs.)

ARABIA. Peninsula of southwestern Asia of approximately 1,027,300 sq.mi., with a total population estimated at 9,500,000. It consists politically of two independent Arab states, Saudi Arabia and Yemen (*q.v.*), the independent sultanates of Oman and Masqat or Muscat; the autonomous sheikhdoms of Bahrein, Kuwait, Qatar and the Trucial sheikhdoms; and Aden colony and protectorates (*q.v.*). Language: Arabic. Religion: overwhelmingly Moslem (Sunni).

Saudi Arabia. Area: *c.* 597,000 sq.mi. (excluding the Rub al Khali desert covering approximately 193,000 sq.mi.). Pop. (no census ever taken, 1947 est.): 6,000,000. Chief towns: Riyadh (cap., 60,000); Mecca (150,000); Medina

(45,000); Jedda (40,000); Hufuf (31,500). Ruler, King Abdulaziz Ibn Abdurrahman Ibn Faisal Ibn Sa'ud; viceroy of Nejd and commander in chief, Emir Sa'ud, crown prince; viceroy of Hejaz and minister of foreign affairs, Emir Faisal.

History. During 1950 King Ibn Sa'ud celebrated the jubilee of his rule. During his reign he had expanded his territories from his original kingdom of Nejd so that his government extended over nine-tenths of the whole of the Arabian peninsula. In 1913 he captured from the Turks the province of Hasa, where two decades later was to be found one of the richest oilfields in the world. In 1920 he conquered the Hail emirate on the north of Nejd. In 1924 he completed the conquest of the Hejaz which placed him in possession of the two holy cities of Islam—Mecca and Medina. In 1925 he captured the province of 'Asir, south of the Hejaz. His jubilee focused the interest of the world on a great personality who had earned its respect and admiration.

In the Arab league Saudi Arabia tended, in association with Egypt, Syria and the Lebanon, to oppose the expansionist policy of King Abdullah of Jordan. A new development. which showed the extent to which the " unchanging east " was modernizing itself, was the loan of $6 million which Saudi Arabia made to Syria in Feb. 1950 (*see* SYRIA). In return for the loan of which a portion was already paid, Syria undertook to supply Syrian goods for Saudi-Arabian consumption. The dollars were presumed to have come from American oil royalties.

In August Saudi Arabia contracted a $15 millio·. loan from the American Export-Import bank. An immediate payment of $4 million was to be devoted to the construction of airports, roads and seaports. The remainder was to be applied for the development of agriculture and for the improvement of health, sanitation and transport conditions.

The report published in July of the Arab-American Oil company (Aramco), whose active concessions were in the Saudi Arabian province of Hasa on the Persian gulf, announced the progress of the railway which was being constructed westwards from the oilfields by way of Kharj and Hufuf to Riyadh. Already 108 mi. of track had been laid and the line was expected to be open early in 1951.

Another development from the oilfields during 1950 was the practical completion of the desert pipeline to pump the Aramco oil westwards across the desert through Saudi Arabia, Jordan, Syria and the Lebanon to the Mediterranean port of Sidon, south of Beirut. The company was negotiating " passage rights " with the governments concerned and it was hoped that oil would be flowing early in 1951.

Developments elsewhere in Saudi Arabia included the building of a new deep-water jetty and customs sheds at Jedda, the Red sea port of Mecca, which would greatly improve the conditions of pilgrim traffic arriving by sea from Africa and India and the far east. A new all-weather highway was also being constructed from Jedda to Medina. (O. Tw.)

Education. Schools (1949): primary 30, secondary 5; pre-university 1.

Agriculture. Dates form the main crop of the Arabian desert, and camels and horses the principal livestock.

Industry. Crude oil production ('000 metric tons, 1949; 1950, six months, in brackets): 23,460 (11,937). Raw materials: copper (metric tons, 1948) 67; gold (troy ounces, 1949) 67,200; silver (troy ounces, 1948) 67,819.

Foreign Trade. Main imports: textiles, food products and vehicles. Main exports: oil, gold concentrates, hides and skins.

Transport and Communications. Licensed motor vehicles (Dec. 1949): cars, 6,000; commercial vehicles 7,700. Radio sets (1949) 9,000.

Finance. Pilgrimage dues (1948 est., £10 million) and oil royalties (1948 est., over £20 million) are the main sources of revenue. Monetary unit: *riyal* nominally = R. 1 (Indian) with an exchange rate of 13·33 riyals to the pound.

Oman and Masqat. Area: *c.* 65,000 sq.mi. Pop. (1947 est.): 830,000. Ruler (from 1932), Sultan Said bin Taimur, the 13th of his dynasty. British consul, Major F. L. L. Chauncy.

Bahrein. Area: 213 sq.mi. Pop. (1947 est.): 125,000. Ruler (from 1942): Sheikh Sulman bin Hamad al Khalifah. British political agent, C. J. Pelly.

Kuwait. Area: *c.* 9,000 sq.mi. Pop. (1949 est.): 120,000. Ruler, Sheikh Abdullah bin Salim. British political agent, H. C. Jakins. The present ruler succeeded his uncle, Sheikh Ahmad al Jabir as Subah who died on Jan. 29, 1950.

Qatar. Area: *c.* 4,000 sq.mi. Pop. (1947 est.): 25,000. Ruler (from 1949): Sheikh Ali bin Abdullah al Thani. In March the new oilfield was formally inaugurated at the new oil port of Umm Said by the ruling sheikh who, by the turn of a tap, started the flow of oil to a waiting tanker.

Trucial Sheikhdoms. Area: *c.* 16,000 sq.mi. (including the sheikhdoms of Shargah, Ras al Khaimah, Umm al Qawain, Ajman, Debai, Abu Dhabi and Kalba). Pop. (1947 est.): 115,000.

See Gerald de Gaury, *Arabian Journey and Other Desert Travels* (London, 1950).

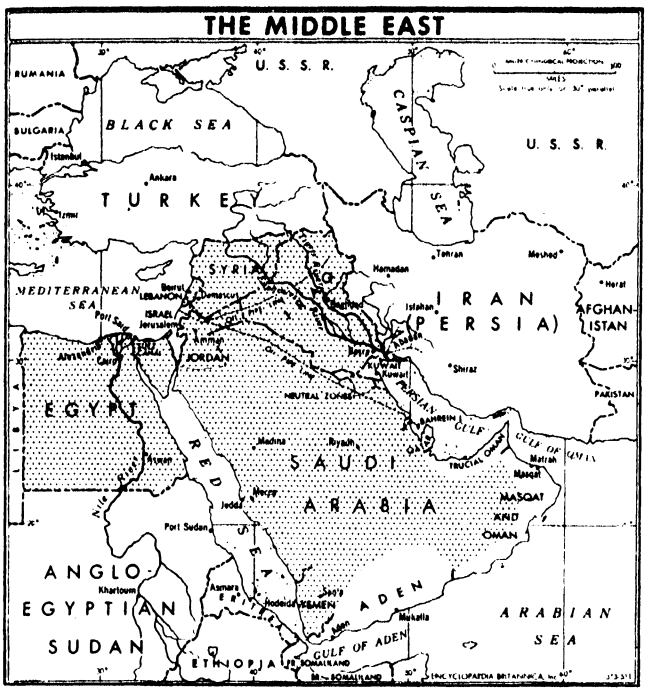
ARAB LEAGUE. The League of Arab States came into being on March 22, 1945, when its covenant was signed in Cairo by the representatives of Egypt, Iraq, Lebanon, Saudi Arabia, Syria, Transjordan and Yemen. The council of the league, on which each member has one vote, has its seat in Cairo. The main object of the League was stated to be to co-ordinate the political action and safeguard the independence and sovereignty of the Arab states. Secretary general, Abdurrahman Azzam Pasha.

During 1950 no progress was made towards the conclusion of peace treaties between the member states of the league and Israel; and on July 10 the Palestine Conciliation commission issued a communiqué in Geneva that its mediation efforts over the past six months had failed and that it was transferring its activities to Palestine to resume contact with the interested governments.

But though they could not agree on peace terms with Israel, the members of Arab league in April did agree unanimously among themselves against the making of a separate peace with Israel by member states, and for the banning of supplies for ships going to Israel; for the blacklisting of ships suspected of working for Israel; and for the refusing of visas to those with Israeli visas on their passports.



Prince Faisal of Saudi Arabia (left) with Nahas Pasha, prime minister of Egypt, at a meeting of the Arab League in 1950.



The members of the Arab League are shown dotted.

A week before, however, on April 16, Jordan had opposed the general approval, subject to reservations, by the political committee of the league of the United Nations' plan for Jerusalem; and on April 13 the Jordan delegate reaffirmed at a full meeting of the league that his government's policy was to annex Arab Palestine subject to the approval of the Jordan parliament for which elections, which covered both the former Transjordan and Arab Palestine, had been held on April 11. On April 24 the newly convened Jordan parliament approved King Abdullah's speech from the throne announcing the annexation of Arab Palestine. The league promptly called an extraordinary session (May 10-15) to discuss Jordan's action; but Egypt failed to carry its motion for the expulsion of Jordan who refused to modify its action or to accept a compromise. Egypt was supported by Syria, Saudi Arabia and the Lebanon; the Yemen and Iraq requested postponement to consult their governments.

The council of the Arab league reassembled on June 12, but Jordan absented itself on the grounds that its attitude was irrevocable; whereupon Egypt, the Lebanon, Syria and Saudi Arabia revived their motion for Jordan's expulsion from the league. The outcome was a new resolution approved by all the states (except Jordan) that Jordan should treat the area of Arab Palestine as " trust property " until Palestine was " finally liberated." The meeting also considered the Arab states' collective security pact. It was eventually signed by Egypt, Saudi Arabia, Syria, the Lebanon and the Yemen. Of the remaining member states, Jordan was absent and Iraq abstained for " technical reasons."

During the rest of the year this divergence of domestic policy persisted among the member states, although in their general policy there was unanimity in a reply to a declaration by the U.S., France and Great Britain about the middle east, affirming: first, that the league desired peace; secondly, that it refused to tolerate any act that attacked the sovereignty and independence of its members; lastly, that the members' rearmament programmes were for legitimate local defence and not, as alleged by Israel, for aggression.

In its session on Nov. 3 the general assembly of the United Nations unanimously adopted a resolution to invite the Arab league to send an envoy to all the assembly's sessions. Israel abstained from voting. All the member states of the Arab league, except the Yemen, sent delegates to the second meeting of the Pan-Islamic Economic conference which was held in Tehran in November. (*See* ISLAM.) (O. Tw.)

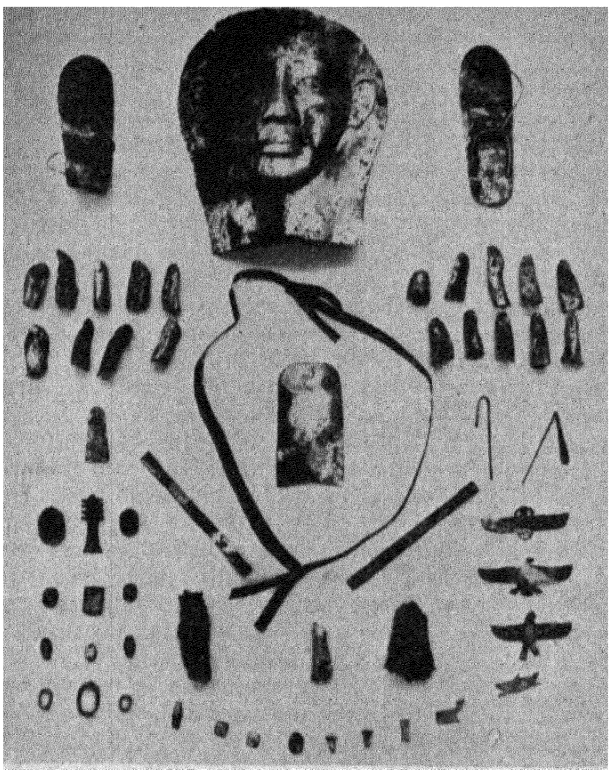
ARCHAEOLOGY. The year 1950 was one of steady progress rather than of spectacular discovery. Particular mention, however, should be made of the discovery of a Roman fort in London; of the excavation of the Mithraic temple on Hadrian's wall; of the completion of work on the Odeion in the Agora at Athens; of the re-excavation of Nimrud in Iraq; of the first examination of the Lashkari-Bazar palaces in Afghanistan; and of the establishment of a state Department of Antiquities in Pakistan.

Great Britain. R. J. A. Atkinson, S. Piggott and J. F. S. Stone examined some of the Aubrey holes at Stonehenge; *i.e.*, the outermost circle of holes, a number of which were excavated in the period 1920-26, when they were taken to be the holes of posts (since decayed or destroyed) and to have been made during the early life of the monument, before the standing stones were dressed and erected. The new excavation produced no evidence that the holes had ever contained posts or stones, though it confirmed the early date assigned to them by the previous excavators. Burnt matter and cremated bones were, however, found in circumstances similar to those encountered on similar sites in recent years: they may have served some ritual purpose.

In the Cripplegate area of London, in the northwest of the Roman city, where variation from the standard construction of the city wall was noted in 1949, a Roman fort was located by the Roman and Mediaeval Excavation council, directed by W. F. Grimes. The area of the fort was about 11 ac., its date probably late in the 1st century A.D. The destruction of the city by Boadicea in A.D. 61 was thought to have shown the need for some military protection when the city came to be rebuilt: as the civil buildings gradually spread to the neighbourhood of the fort, the fort was, it seemed, eventually incorporated in the later city defences. Certain peculiarities of the outline and street plan of Roman London were thus now explained.

On Hadrian's wall I. A. Richmond completely excavated the newly found *Mithraeum* outside Carrawburgh (Procolitia), a wall-fort ¼ mi. E. of Housesteads and 6 mi. N.W. of Hexham, Northumberland. The temple, built just south of the well dedicated to the local goddess Coventina (found in the 19th century), had three periods, which corresponded with the 2nd-, 3rd- and early 4th-century occupations of the wall. The building, in its last phase, is one of the most complete ever found in Britain or Europe: it consisted of a main rectangular room with a vestibule, by which the building was entered; at the north, or sanctuary end, were three inscribed altars, one of which bore a painted relief of Mithras; along the side walls were substantial remains of post-and-wattle stall-work, in front of which were set a number of small uninscribed altars; statues of the two *dadophori* stood near the entrance to the vestibule, which contained a recess for ritual burial or initiation in its floor. The building was placed under the care of the Ministry of Works.

Apart from London, the main work on Roman towns was at Canterbury and Chichester. At Canterbury traces were found of a large public building of massive construction: it was thought to have been a theatre, but, if so, it was of classical rather than of Romano-Celtic type. At Chichester it was established that the embankment of the walls was raised late in the 1st century A.D. and heightened in the 2nd, and part of a house with a tesselated floor was found. Among a large number of other places excavated may be mentioned: Brockley hill, Middlesex (traces of industrial activity at the site of the town of Sulloniacae); Brough-by-Bambridge,



Some of the jewels and ornaments found on April 14, 1950, in a 2,500-year-old tomb near Atrib village, north of Cairo.

Yorkshire (a fort); Great Casterton, Rutland (a town destroyed in the Pictish war of 369); Lullingstone, Kent (a villa); and Whittington, Gloucestershire (a villa with tesselated pavements). The Ordnance Survey discovered and traced a Roman road running northwards from Chichester. In the Scilly Isles excavations by the Ministry of Works showed the extent of Roman influence there: pottery of the Roman period was found on St. Martin's and St. Mary's in houses of native type similar to those in Cornwall.

Europe. *Austria.* H. Vetters reported on work at Magdalensberg, 10 mi. N.W. of Klagenfurt. The town may have been the capital of Noricum, which was absorbed into the Roman empire in 15 B.C. Structural finds included a large hall, standing about 30 ft. to the wall plate and having traces of iron reinforcement, mosaics and wall paintings. Beneath the remains of the city were found remains of earlier occupations of the middle bronze age and later. An account of the border fortifications of the Roman provinces of Noricum and Pannonia was given by G. Pascher in *Der Römische Limes in Oesterreich*, vol. xix, Vienna, 1950: it contains a catalogue of sites and finds and a classification of the Roman roads.

Greece. In Athens, the plan matured to restore the *stoa* built by Attalus II of Pergamum (159-138 B.C.) as a museum for the material excavated in the Agora. The work was to be carried out for the Greek government (the owner of the finds) by the American School of Classical Studies, with some financial help under the European Recovery programme. In 1949 traces were found in the northwest corner of the Agora of a mid-5th-century limestone building which was identified as the *stoa poikile* of Peisianax. Further work in the area was described in *Hesperia* (Princeton) by Homer A. Thompson, who gave an account of the examination of the Odeion mentioned by Pausanias in his account of the Agora. This great theatre lay in a dominating position immediately north of the middle *stoa* (2nd century B.C.); built towards the end of the 1st century, it was perhaps connected with Agrippa's visit to Athens in 16 or 14 B.C. The original structure comprised a central complex of auditorium, dressing rooms and lobby, surrounded by a balcony, which was in effect an extension of the terrace of the middle *stoa*. The building is important in the development of ancient theatre design, not least for its combination of Greek and Roman features. The auditorium was square and of considerable extent, a factor which probably led to a collapse in A.D. 150. Thereafter the building was re-modelled and re-roofed, with the *scena* turned into a colonnade, the piers of which bore monumental figures of giants and tritons. The building was thenceforward devoted to rhetorical rather than to dramatic performances until its sack by the Heruli in 267. Some continuity of use may be associated with the use of the site as a gymnasium during the 5th century, after which it was abandoned and silted up.

In Samothrace it was reported that excavations by the Institute of Fine Arts of New York university, conducted by K. Lehmann, had secured further evidence for the date and setting of the famous figure of the Winged Victory (now in the Louvre), together with a fragment of Parian marble which was thought to be part of the right hand. The fingers, except the third, were gone; but enough remained to suggest that the hand had held some light object; *e.g.*, a golden fillet. Pottery evidence suggested a date *c.* 200 B.C.

Italy. In a grotto on Levanza in the Egadi archipelago P. Graziosi investigated some latterly found neolithic cave-paintings. Further exploration revealed an inner cave, with figures described by Graziosi as of a naturalistic, palaeolithic style and including many representations of deer, some of bulls and of stylized human figures and one of a horse. G. Jacopi investigated Sybaris in Calabria, a city of Magna Graecia: founded late in the 8th century B.C. and destroyed by the citizens of Croton in 510, it rose again but was finally destroyed by the Bruttii in the middle of the 4th century B.C.

Further researches in the plain of Foggia in northern Apulia were conducted by J. P. S. Bradford, whose work was based primarily on aerial surveys, though selected examples were tested by excavation. Discoveries included some 200 ditched and enclosed neolithic settlements, of which those examined on the ground yielded large quantities of pottery, stone axes and bone implements. The survey also showed remarkable details of the Roman system of centuriation, with its associated farmsteads, especially in the neighbourhood of the *colonia* of Lucera. Later earthworks and their associated field systems also were plotted, as well as what might have been the emperor Frederick II's hunting palace at San Lorenzo. The further investigation of a chance wartime discovery at Castelseprio, 20 mi. N. of Milan, was reported. In the ancient church of Santa Maria there was found a well-preserved cycle of wall paintings of the Infancy of Christ of the highest quality, in treatment and subject not unlike the work on the ivory throne of Maximian at Ravenna. It was suggested that they might be the work of a 7th-century refugee artist from the Levant. (G. P. Bognetti, G. Chierici and A. de C. d'Arzago, *Santa Maria di Castelseprio*, Milan).

Near and Middle East. *North Africa.* A British expedition surveyed Syrtica and Cyrenaica for the Map of Roman Libya committee. Attention was mainly directed to the Roman road and frontier system; and the latter was found to be strongest towards the Syrtica region, the main direction of barbarian attack.

Cyprus. C. F. A. Schaeffer, director of the French Centre of Scientific Research, Paris, described further work at the Mycenaean site of Enkomi near Famagusta: in addition to examining the lower Mycenaean levels, he was able to show that the upper levels were to be associated with the period of Philistine occupation. The work was expected to throw much light on the birth and growth of the iron age in the eastern Mediterranean.

Turkey. Tahsin Ozguc reported on further excavations directed by him (for the Turkish Historical foundation) at the Karum; *i.e.*, the Assyrian trade-enclave, near the great mound of Kültepe in central Anatolia. The settlement belonged to the early part of the 2nd millenium B.C. and came to a sudden end before the main Kültepe site. Of four occupation levels found, the second highest had ended in a disastrous fire so rapid in its effect that the inhabitants had been unable to salve their belongings, which now constituted an archaeological find of remarkable completeness.

The British school at Athens continued work at Old Smyrna and encountered occupation levels contemporary with the reign of Croesus. They produced black and white pottery of Eastern Greek origin and some imported pieces from Attica.

Syria. C. F. A. Schaeffer reported on his work on the Canaanite city of Ugarit (Ras Shamra), near Latakia. The massive fortifications, 50 ft. across, had been further defended by a great gate tower, masking the approach. The palace, near this entrance, was fronted by a portico with two rows of wooden columns on heavy stone bases; inside, Schaeffer discovered a large audience chamber and three royal tombs, long since robbed. Near the way into the palace, but not directly connected with it, were several rooms containing a large number of inscribed clay tablets, mostly relating to administrative matters. One of these rooms, thought to have been a schoolroom for scribes, contained a tablet (and a fragment of another) bearing an alphabet: a discovery which carries back to the 14th century B.C. the order of letters of our alphabet. The city was damaged in an earthquake of 1365 and sacked about 1350; but some occupation continued for the next two centuries.

Iraq. M. E. L. Mallowan directed, for the British School of Archaeology in Iraq and for the Department of Antiquities of Iraq, the excavation at Nimrud of the 9th century palace of Assur-nasir-pal II, the source of the famous Assyrian sculptures found by A. H. Layard in the 19th century and now in the British Museum. Nimrud, an Assyrian city and army centre, lies some 20 mi. S. of Mosul. Part of the area dug by Layard was re-examined; and some impressive sculptures, comparable to his finds, as well as some inscriptions, were discovered. Excavation of the south wing of the palace showed it to be a plain brick structure: it was assigned to officials, to the royal bodyguard and to servants and contained stores of arms and food. Three inscriptions were found there, recording the campaigns of Assur-nasir-pal. At a new site, in the east part of the great mound, a block of offices was discovered, including a repository for archives containing many 8th-century inscribed tablets. Among other buildings was a block of similar date, planned with a central courtyard surrounded with ranges of rooms and a group of barracks. The site was rich in finds of all classes, but probably most notable for its carvings, among which were an 8th-century chalcedony seal bearing a mythological scene, a magico-medical plaque and many small animals in ivory.

D. E. McCown dug near the temple of Enlil, an early paramount god of Sumer. Beneath the remains of a Parthian fortress and Kassite temple was an occupation of the 3rd dynasty of Ur (early 2nd millenium B.C.). The latest excavation of the temple settlement and cemetery at Eridu, directed by Firad Safar, gave a remarkably complete picture of the pre-Sumerians of the 4th and 5th millenia B.C.: discoveries included evidence of a culture earlier than that of al-Ubaid, with pottery resembling that of Halap and Samarra in northern Iraq: many prehistoric temples which contribute to the typology of temple building; and an al-Ubaid cemetery of great size and richness. Tell Hamal continued to produce a flood of documents of the beginning of the 2nd millenium B.C., the latest being a mathematical text.

Persia. The work of the French archaeological mission at Susa fell into two parts. In the " Royal Town," beneath two Islamic occupations and one 6th-century, was found a brick-built town, which had been inhabited by Christian Persians but was destroyed with its inhabitants by Shapur II in the



***Arab workers,** under the supervision of J. L. Kelso, of Pittsburgh, U.S., clearing earth from the site of an ancient fortress in the ruined city of Jericho, Palestine.*

middle of the 4th-century. West of the main site an extensive necropolis was excavated. The tombs took the form of deep vaulted burial chambers, approached by shafts or steps; dated by R. Ghirshman as belonging to the period 300 B.C.-A.D. 300, they contained clay sarcophagi with associated pottery and alabaster vessels and figurines of both Hellenistic and oriental styles.

Afghanistan. M. D. Schlumberger reported on excavations at one of three Ghaznavid palaces of Lashkari-Bazar, first located in 1948, near the great Ghaznavid fortress and city of Bust, about 90 mi. W. of Kandahar. Of considerable importance in the study of Moslem secular architecture, the palace examined was probably built by Mahmud of Ghazni, who began the Moslem drive on India early in the 11th century; covering about 35 ac. and rectangular in outline, it was symmetrically planned round a great central courtyard with a large open bay in the middle of each side. In addition to suites of private apartments, the discoveries included a large banqueting hall and an audience chamber decorated with human figures (contrary to orthodox Moslem tradition) and stucco medallions.

Pakistan. The government of Pakistan established a national museum at Karachi. The new Department of Antiquities began work (under R. E. Mortimer Wheeler) on the great prehistoric city of Mohenjo-daro in Sind. The brick-built walls of the granary of the citadel, standing to a considerable height, showed the use of timber reinforcement, a feature not hitherto encountered in buildings of the Indus civilization. (R. E. Mortimer Wheeler, *Five Thousand Years of Pakistan*, Karachi, 1950.) (J. CHN.)

North America. W. F. Libby and James Arnold of the University of Chicago, having completed the testing-phase of the radioactive carbon isotope, Carbon^{14}, for securing dates of prehistoric organic materials, made available in 1950 a list of samples dated by this means within the previous two years. The dates were to be correlated with archaeological and geological evidence, and statements as to the probable validity of the results obtained were expected from the investigators who provided the samples. Two additional Carbon^{14} dating laboratories were being prepared for operation at the University of Michigan and Columbia university.

The problems of early cultures in the New World, particularly in North America, received considerable attention. The apparent gap between the chronologies of the later Indian cultures that could be connected with the historic period and early remains such as Folsom and Yuma was being closed. New dating techniques indicated that archaeologists had been too conservative in estimating recent chronologies, while geologists had over-estimated the age of late Pleistocene phenomena.

George F. Carter continued work at La Jolla, California, on problems of terraces, valley fill, soils and sea-level and their relations to evidences of human occupation. One grinding stone, a core tool and two flint flakes found beneath the soils of the Scripps cliff came from formations that suggested that they had been deposited during a period of high sea-level and that man might have been there in interglacial times.

Near Port Arthur, Ontario, Richard MacNeish of the National Museum of Canada discovered a site which offered additional information on Palaeo-Indian culture. Plainview-type projectile points, large crude choppers and a variety of flint scrapers, some very delicately chipped, were found in an old beach deposit now 235 ft. above the level of Lake Superior.

J. L. Giddings of the University of Alaska continued work at the remarkable early site at Iyatayet on Cape Denbigh in Norton sound. Additional artifacts from the sealed basal layer of the deposit further demonstrated the relationship of this microlithic complex to the Folsom and Yuma cultures of western North America and to the Mesolithic of northern Europe and Asia. This site is extremely important in that it has given the first clear evidence relating early cultures of the Old and New Worlds.

The cave in the Trail creek region of Seward peninsula discovered in 1949 was completely excavated and 11 additional caves discovered, one of which proved to contain cultural material. In the surface layers Eskimo artifacts were found; but beneath these, separated by a layer of accumulated rock dust, was discovered a complex of flint artifacts very similar to that found by Giddings at Iyatayet.

Large-scale excavation took place on outstanding sites discovered by surveys of areas destined to be covered by the waters of reservoirs. Nearly all the fieldwork was done in co-operation with the River Basin Surveys project of the Smithsonian institution; Robert L. Stephenson excavated a variety of sites in the Whitney reservoir area on the Brazos river in Texas. Most interesting were some unexplained large pits 60 to 70 ft. in diameter discovered near Lavon. Jack Hughes and Alex Krieger surveyed the Falcon Reservoir area on the lower Rio Grande and discovered a number of sites both historic and prehistoric.

The Wisconsin Archaeological survey worked primarily at the Aztalan site. Two houses were found and new data added on stockade features and burials. The University of Michigan began a five-year survey and excavation programme in the central Mississippi valley between the mouths of the Illinois and Ohio rivers under the direction of James B. Griffin. Excavations were made at the Cahokia mound-group in an effort to define more closely the two Mississippian cultural levels found there; and surface surveys were extended down the Missouri side of the Mississippi to Cape Girardeau, outlining a sequence from Eastern Archaic to Mississippian. The Ohio state museum excavated an Archaic site near Oxford, Ohio, and found a series of trough-like refuse pits, heavy stemmed projectile points, scrapers, bone awls and needles. A post-mould pattern was worked out.

The University of Kentucky partially excavated a large Adena-culture burial mound in Mason county. The summer field school of the University of Georgia under the direction of A. R. Kelly continued survey and salvage in the projected reservoir areas of the lower Flint and Chattahoochee. William Sears excavated a burial mound at the Kolomoki site and found ceramics and other artifacts of the Weeden Island period. Ripley Bullen of the Florida Park service excavated at the Madirs Bickel Mound state monument and worked out the chronology of the site. John Goggin conducted the summer field session of the University of Florida at the Zetrouer site (17th-century Spanish-Indian) and briefly inyestigated Fort Pupa (a slightly earlier Spanish fort) on the St. Johns river. A large collection of European and aboriginal artifacts was secured.

The University and the Museum of New Mexico co-operated with the National Park service in excavating sites that were to be flooded by the Chamita reservoir on the Chama river. A pueblo dating *c.* A.D. 1300 with some unusual semi-subterranean structures was one of the sites investigated. Paul Martin and John Rinaldo of the Chicago Natural History museum continued their work in the Pine Lawn valley in southwestern New Mexico, this season's efforts being particularly directed to the excavation of several dry caves.

Central America. Jorge Acosta excavated at Tula and some of the smaller surrounding sites in Mexico. Most of the work at Tula was concentrated on the Quetzalcoatl structure. The Museo Nacional of Mexico continued work at the remarkable site of Tlatilco. Numerous additional burials were found, adding considerably to the collection of Middle Culture and Olmec-like grave furnishings.

From the Rio de La Pasión in Guatemala Barnum Brown reported the discovery of a fragment of fossil bone, possibly

sloth, which has three V-shaped cuts that appear to have been made in fresh bone by man. This specimen, associated with other Upper Pleistocene faunal remains, gave the first direct suggestion of very early occupation of Guatemala.

Linton Satterthwaite of the Museum of Pennsylvania began a programme of investigation of house mounds in British Honduras. At Caracol he found a number of previously undiscovered monuments including stelae with dates. At Benque Viejo a part of a magnificent stucco façade was uncovered in very good condition. Stanley Boggs continued work at Tazumal for the government of Salvador (this was the tenth season of work at this complex site, and considerable information was gathered on the relations of the Tohil plumbate horizon to the local equivalents of Maya classic).

South America. In Chile a party headed by Greta Mostny of the Museo Nacional de Historia Natural conducted an ethnographic survey in the region near the town of Peine in the Atacama desert: small protohistoric stone buildings with some cut stone at the corners and in door jambs were discovered, and the culture was related to the modern occupation.

Wendell C. Bennett of Yale university made a survey of the Montaro basin in the central highlands of Peru and excavated at the extensive prehistoric site of Huari. This latter work suggests strongly that Huari was the highland centre from which the coastal Tiahuanaco culture spread. M. and Mme. Henry Reichlen of the Musée de l'Homme, Paris, completed their work in the Cajamarca region of the northern highlands and continued in Lima, working up the material. Richard Schaedel of the University of Trujillo, Peru, conducted a study of prehistoric architecture on the north coast between Casma and Leche valleys. (J. A. F.)

ARCHERY. The 1950 world championships were held in Copenhagen in July. Hans Deutgen (Sweden) won the men's title for the fourth time with a score of 3,141. E. Tang Holbek (Denmark) was second with 2,878, Russ Reynolds (U.S.A.) third with 2,854 and František Hadas (Czechoslovakia), the 1949 runner-up, fourth with 2,801. The men's team results were: Denmark first, Sweden second, Czechoslovakia third. The ladies' title was won by Jean Lee (U.S.A.) with 3,254 points. Jean Richards (U.S.A.) was second with 2,919, and R. Windahl (Sweden) third. The ladies' team results were: Finland first, Sweden second, England third.

At Oxford in August the British National championship results were, ladies: first, Mrs. George Arthur (Edgware, Middlesex) with 1,336; second, Mrs. A. W. Burton (Portsmouth) with 1,326; third, Mrs. T. H. Fisher (Portsmouth) with 1,191. The gentlemen's results were : first, Russell J. Beal (Portsmouth) with 1,376; second, B. McNaughton (Portsmouth), 1,256; third, George Brown (London), 1,232. Hampshire teams won both the ladies' and gentlemen's county championships.

In the United States championships, at Lancaster, Pennsylvania, Jean Lee (Massachusetts) won with 3,812 points; Ann Weber (New Jersey) was second with 3,584 and Mrs. J. Richards (California) third with 3,556. The first three men were Stan Overby (California), 3,249, Russ Reynolds (Ohio), 3,115, and William Sterner (New York), 3,027. (C. B. E.)

ARCHITECTURE. The completion of the new House of Commons was without doubt the architectural event which attracted most attention during 1950. The "Tudor Domestic" style of the new chamber inevitably aroused controversy. There were those who would have preferred a conjectured reconstruction of St. Stephen's chapel, the first permanent home of the House of Commons, those who had wanted a faithful reconstruction of Sir Charles Barry's Gothic-revival chamber, and those who believed that each age should have the courage of its own architectural convictions and could see no reason why the new chamber was not frankly contemporary. In his planning it was generally agreed Sir Giles Gilbert Scott (*q.v.*) had exercised considerable ingenuity. With only a slight addition in total height three extra floors had been fitted in. Two were in the vertical space of 27 ft. below the floor of the old chamber, where its heating and ventilating apparatus had been housed; these provided space for committee and ministers' rooms, for secretaries and for interviewing. The third extra floor, for the clerk of the House and his staff, was over the top of the new House. Accommodation in the chamber itself was increased from 802 to 939, chiefly by replanning and extending the galleries. The new floor of the House was not made larger since it was thought important to retain that sense of intimacy in debate which is characteristic of the House of Commons. An elaborate and advanced system of air-conditioning was designed by Oscar Faber. In view of the varying conditions in different parts of the House at different times, eight separate air-conditioning plants were provided. The wood used for the roof and for the major part of the panelling was oak and the floor of Queensland maple.

The main structural work was completed on two of the largest buildings on the South Bank site of the 1951 Festival of Britain. On the Dome of Discovery building, the last sheet of aluminium for the roof was laid in October. The building would incorporate three platforms, supported on a concrete podium. The dome was supported on eight cigar-shaped steel struts, consisting of 3-in. tubes. The installation of the internal equipment for the permanent concert building, to be known as the Royal Festival hall, was well under way by the end of the year and was to be completed in time for the opening on May 3, 1951. On Nov. 9 the King and Queen visited the site of the Festival of Britain's "Live Architecture" exhibit, a new neighbourhood to be known as Lansbury. The scheme would finally form part of the London County council's long-term scheme for the comprehensive redevelopment of the Stepney-Poplar reconstruction area and would cover an area of 30 ac. It was planned in the town planning division of the department of the architect to the L.C.C., Robert H. Matthew, under the planning officer Arthur Ling. A number of private architects were invited to design the various buildings that would form the neighbourhood.

In the City of Westminster the housing problem was still very acute and drastic measures were needed to deal with it. The Westminster City council decided to concentrate on alleviating the shortage in one large area rather than several small ones. In 1945-46 a competition had been held to provide designs for a large number of dwellings on a site which covered 30 ac. and stretched 600 yd. along the north bank of the Thames at Pimlico. The winners were the firm of Powell and Moya, and the first block of flats in the scheme was completed in Oct. 1950. Density would be at 200 persons an acre and, apart from the flats, there would be about 30 shops, laundries, a mortuary, a restaurant, public lavatories and a service station with an underground garage for 200 cars. The scheme was to be carried out in four sections, the first consisting of 495 flats and the second of 300 dwellings some of which would be three-storey houses. When all sections were finished there would be a total of approximately 1,600 dwellings. Space heating and domestic hot water were provided by a district heating system utilizing waste heat from Battersea power station which faced the site across the river. It was estimated that the scheme would save 10,000 tons of coal each year.

Commonwealth. *Australia.* Designs were published for the new National university at Canberra. The architect was Professor Brian B. Lewis, of the University of Melbourne. His designs were based on a main axis which followed a

well-defined ridge of ground. At one end, above a future lake, there would be an open-air auditorium and along the ridge, ranged at each side of a central lawn, the library administrative offices and public lecture rooms. University house, at the other end of the axis, would be the social focus of the university and provision was made for employing the best Australian artists and sculptors to decorate it. The Institute of Physical Sciences would be the first faculty building to be completed, and this would later be followed by those for the Medical institute, and for the social sciences and Pacific studies departments. A housing scheme, sited on a steep slope overlooking the lake, formed part of the layout. The house types were designed in collaboration with Roy Grounds.

Canada. The most interesting new building in Canada during 1950 took place in British Columbia. Sharing, as it does, many similarities of climate and geography with California, it is not surprising that the influence of San Francisco's Bay Region architecture should have been so marked. Among the most noteworthy buildings were Ridgeview Elementary school, the Vocational institute and a public library, all at Vancouver and all designed by the firm of Sharp and Thompson, Berwick, Pratt. An air-conditioned Gospel hall, was built in Vancouver to the designs of Robert R. McKee for the Plymouth Brethren; it comprised an auditorium to seat 600 and an insulated cry-room for babies and a cafeteria. A house overlooking the sea, also by McKee, was constructed of six-foot module fir posts and beams, faced with glass and cedar board. It had a large "Indian" mural by the architect, depicting a whale, painted on a screen wall outside the front door.

South Africa. The first three floors of a building in Johannesburg, designed by J. C. Cook and Cowen for the South African Blood Transfusion services, were completed. A further seven floors, containing flats and professional suites, would be added later. The building would have a reinforced concrete frame structure; panel infillings and facings would be of brick and terrazo. In order to provide accommodation for the rapidly growing population of Salisbury, the capital of Southern Rhodesia, the city council inaugurated a scheme for a block of flats which would be the highest building in Rhodesia. Designed by the firm of Ross MacKenzie, van Heerden and Hartford, it would comprise 108 one-room and 84 two-room flats on 12 floors. The foundations would be a reinforced concrete raft and spreader beams and the main structure, a series of parallel spine walls, would be carried at ground floor level on piers similar to those of Le Corbusier's *Unité d'Habitation* near Marseilles. Windows would be continuous, and protected by hoods against the midday sun. Finishes would be of brick and fair-faced concrete, with aluminium cladding for the projecting fins of the spine walls and a polished stone veneer round the main entrances. The flat reinforced concrete roof would be surfaced with bitumen, screed and a light "umbrella" of corrugated asbestos. Vertical expansion joints would divide the building into seven separate structures.

Europe. *Denmark.* One of the best office buildings in Copenhagen was completed for the Shell company. Designed by Wilhelm Lauritzen (architect also of the excellent broadcasting building) it had a reinforced concrete frame and was faced with black slate, the outlines of the framework being in white plaster. At Klampenborg, north of Copenhagen, a terrace of houses was built to the designs of Arne Jacobsen. Built of yellow brick, the south façades were mostly of glass. The roofs were low-pitched and covered with asbestos tiles.

France. The results were announced of an important competition launched in April 1949 by the French Ministry of Reconstruction and Town Planning. The aims of the competition, which was concerned with the design ar construction of flats and houses, were threefold: to stimula new ideas; to provide a means of assessing under comparab conditions various building methods old and new; to arri at new solutions of the housing problem that were bo economically feasible and aesthetically pleasing. The cor petitors formed groups consisting of architects, engineers ar builders, and entered schemes for any one of the thr suggested sites: (1) nine- to twelve-storey flats at Villeneuv Saint-George; (2) two- to four-storey flats at Creil-Con piègne; and (3) bungalows or two-storey houses at Chartre The three winning designs, which it was intended to execu were (1) by Marc and Leo Solotareff, architects, and Lajoini builders; (2) by Gravereaux, architect, and Societé Cogetravo builders; and (3) by Camelot, Sainsaulieu and Rivet, arch tects, and Societé Nouvelle de Construction et de Travau builders.

Germany. The building that temporarily housed the fir parliament of the German federal republic was inaugurate in 1950. Originally erected by the Prussian government i 1930 as part of Bonn university, it occupied a fine site on th banks of the Rhine. Alterations and additions were mac under the direction of Professor Hans Schwippert to provic a large hall for the *Bundestag* (lower house), a restaurant t seat all members of both houses and additional offices. A great deal of ingenuity was shown in the construction whic had to be completed in four months during which the existir building continued in use. The impersonal simplicity of th earlier building was carried successfully through into the ne wings.

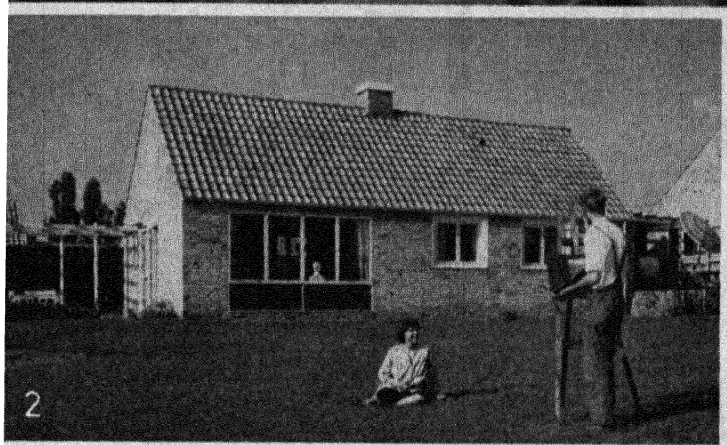
Italy. In Rome the important extensions to the ne railway station were nearing completion. They were designe by two groups of architects who shared first prizes in competition held shortly after World War II. The first pa of the new station was completed just before the war, in th style popular under Mussolini, with façades resembling Roman aqueduct. The exceptionally elegant new extensior of glass and reinforced concrete provided a marked contra with the original work.

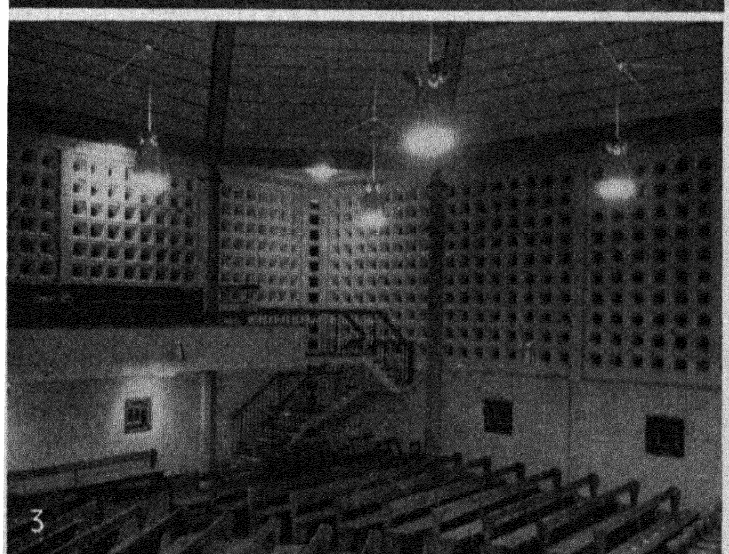
Switzerland. Two notable buildings were both in Genev One was a block of flats, by Marc T. Saugey. The othe a Protestant church and assembly hall by W. M. Moser, Haefeli, Moser and Steiger, with an exposed reinforce concrete frame, had walls of specially designed concret blocks and circular sheets of glass.

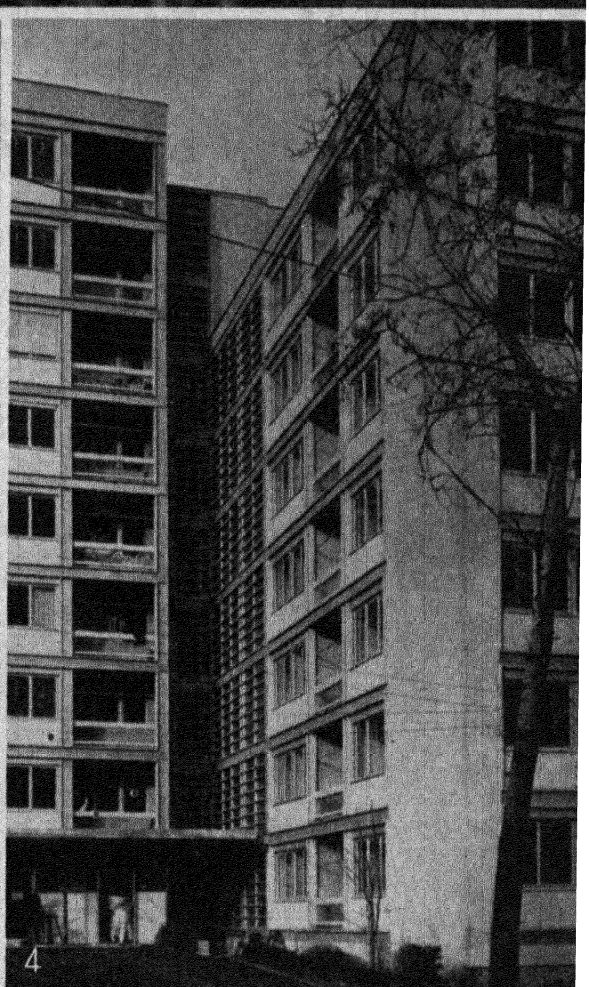
Eastern Europe. In both Hungary and Czechoslovakia number of good modern buildings were completed, apparentl still free from the stultifying grip of Stalinist aesthetic theor This could not be due to ignorance of the party line since th architectural magazines of both countries devoted a larg amount of space in an attempt to elucidate it. In Hungar the most interesting buildings were the new school fc apprentices attached to the Matyas Rakosi metal foundr and the clinic at Ujpest by Ferenc Kiss. In Czechoslovaki a central post office at Bratislava was built by Krama The structural framework was of steel with a brick infillin faced with Slovak sandstone. A 13-storey block of flats fc factory workers was completed at Horni Litvinov. Th design, by E. Linhart and V. Hylsky, won first prize in competition held in 1947. The flats provided accommodatio for single people and families and included day nurseries, nursery school and a central kitchen with canteen. The stru ture, of steel with brick infilling, was faced with prefabricate panels. (I. R. M. M.)

United States. The general effect of the Korean war o the U.S. architectural profession had some immediate effec in 1950. Credit controls at once curtailed building i the small house field. The directive on credit controls wa followed by restrictive order M-4 of the National Productio









MODERN HOUSING and PUBLIC BUILDINGS

A single-storey house in Denmark by E. Hoff and B. Windinge (2) and flats in Geneva by Marc T. Saugey (4) are examples of housing in 1950. The Parliament building (1) at Bonn, Western Germany, which was inaugurated in 1950. In Geneva, a new Protestant church by W. M. Moser (3) was completed, while in Rome progress was made on the new railway station (5) which was started before World War II.



authority. This banned amusement and recreational building. Its effect was immediate, especially as it was apparently the forerunner of further restrictive orders to come.

The slight panic nevertheless quickly evaporated. The reluctance on the part of contractors to submit firm bids appeared to be lessening toward the end of the year. Curiously enough there arose an interesting stimulation of immediate planning in various non-military fields. This was the result of a desire to get planning work under way, and if possible construction also, before the country found itself in a serious predicament. As the year closed, the outlook for the profession was more stable that it had been six months earlier.

Residential. Considerable interest was focused in 1950 upon the public housing programme. At the close of the year this programme was almost entirely in the planning stage, and the rise in prices was causing a drastic change in the planning phases. It was obvious that, under existing authorizations and appropriations, the programme could not be carried out as originally foreseen. The official remedy had been the cutting down of space allotments and the elimination of any superfluity in architectural design.

In the private residential field there was in some areas a marked falling off in construction of what are loosely termed "luxury houses." Houses well out of the low-cost range were being built in Texas, Nebraska and other places which hitherto had not been especially noteworthy in this field. An interesting manifestation was the building of fine homes for well-to-do farmers and ranchers in remote parts of the middle west. Very often in these houses the architects had the opportunity to develop completely contemporary and up-to-date structures.

Many interesting smaller modern houses were designed and built, and modern architecture seemed to be passing through its growing stages and arriving at maturity. In many of these houses the modernistic clichés had been eliminated except where the design of modern houses had fallen into less capable hands, or in some instances had fallen outside the hands of the profession completely.

Techniques and Materials. There was an increasing concentration on research, in which the American Institute of Architects was taking a leading role, as was the Building Research Advisory board, set up under the National Research council and supported entirely by the construction industry.

The construction industry also established a project to explore and advocate modular co-ordination. This was being carried out under the immediate direction of the American Institute of Architects and was expected to have a profound effect on architectural design in general. Weather conditions which affected the design of buildings were also being studied.

Commercial. The general tendency toward decentralization throughout the country gave the architect a chance to develop a new field of design, principally of the shopping centre and of the supermarket, a peculiarly American institution.

Further studies were made in the field of indoor and outdoor car-parking facilities, and new and ingenious developments were being carried out in public garages. The open-air cimena which, in its initial development, seemed to offer little opportunity to the architect, had progressed to a point where architectural service was demanded, and some architects had become experts in this field. No longer was the open-air cinema simply a screen set up on a piece of waste land: it had become an architecturally planned centre of amusement.

In 1950 office building design was characterized by greater simplicity bordering on barrenness, except in the case of the U.N. building in New York city, which was a special-purpose building. The year saw a breaking-away from the skyscraper *per se*. There no longer appeared to be a striving for a building higher than its fellows for the sake of the owner's prestige.

Governmental. In governmental architecture there was, too, a trend toward simplicity. Great attention was paid to functional suitability and to the lowering of maintenance cost. That these objectives could be achieved with a corresponding improvement in the architectural appearance of a building was shown in Louis Justement's courthouse, under construction in Washington.

To sum up the architectural progress of 1950, there was an intelligent concentration on study and research, an adaptability to the national economic pattern and a steady advance, despite a momentary uncertainty brought about by the disturbed international situation. (*See* also BUILDING AND CONSTRUCTION INDUSTRY; HOUSING; INTERIOR DECORATION; TOWN AND COUNTRY PLANNING.) (ED. R. P.)

AREAS AND POPULATIONS OF THE COUNTRIES OF THE WORLD.

The political entities of the world are listed here with their areas, populations and number of persons per square mile. The latest census or official estimates are given for each country. Areas in square miles are in accordance with the boundaries for the year of the population figure unless otherwise noted.

Name of continent and state	*Area* (*sq.mi.*)	*Population* ('000)	*per sq.mi.*
WORLD TOTAL	58,062,977	2,388,939	45·9*
AFRICA	11,611,409	191,410	16·5
Belgian colony and trusteeship	925,094	14,811	—
British colonies, dependencies, etc.	3,046,063	67,038	—
Egypt	383,000	20,045	52·3
Ethiopia	350,000	10,000	28·6
French overseas territories	4,270,896	50,037	—
Italian trusteeship and condominium	194,000	955	4·9
Liberia	43,000	1,648	38·3
Libya	679,183	1,177	1·7
Portuguese colonies	794,959	11,480	—
South-West Africa (mandate of Union of South Africa)	317,725	374	1·2
Spanish colonies and protectorate	134,763	1,587	—
Tangier, International Zone of	232	150	646·6
Union of South Africa	472,494	12,108	25·6
ANTARCTICA	6,000,000	Uninhabited	—
ASIA (exclusive of U.S.S.R.)	10,575,583	1,274,211	120·5
Afghanistan	270,000	12,000	44·4
Arabian desert	193,000	Uninhabited	—
Bhutan	18,000	300	16·7
British colonies, dependencies, etc.	245,932	10,577	—
Burma	261,749	18,200	69·5
Ceylon	25,332	7,500	296·1
China (including Formosa, Kwantung, Manchuria and Tibet)	3,876,956	475,000	122·5
French overseas territories	285,987	27,777	—
India	1,220,099	347,340	284·5
Indonesia	583,479	79,260	135·8
Iraq	116,600	4,990	42·8
Israel	7,800	1,247	159·9
Japan (1949)	146,690	83,074	566·3
Jordan	37,110	400†	—
Korea	85,225	29,291	343·2
Kuwait	9,000	120	13·3
Lebanon	3,470	1,238	356·8
Mongolia	606,000	2,000	3·3
Nepal	54,000	6,910	128·0
Netherlands New Guinea	151,789	1,000	6·6
Oman and Masqat	65,000	830	12·8
Pakistan	337,524	75,000	222·2
Persia	634,413	18,387	29·0
Philippines	115,600	19,356	167·4
Portuguese colonies	8,876	1,487	—
Qatar	4,000	16	4·0
Ryukyu Is. (U.S. occupied terr.)	935	909	972·2
Saudi Arabia	597,000	6,000	10·1
Sikkim	2,745	122	44·4
Syria	72,560	3,407	47·0
Thailand (Siam)	198,272	17,987	90·7
Trucial Sheikhdoms	16,000	105	6·6
Turkey	296,185	20,903	70·6
Yemen	31,000	1,600	51·6

Name of continent and state	*Area (sq.mi.)*	*Population ('000)*	*(per sq.mi.)*
AUSTRALIA AND OCEANIA	3,304,507	12,759	3·9
Australia	2,974,581	8,179	2·7
Australian dependencies	183,553	1,313	—
British colonies, dependencies, etc.	24,700	552	—
French colonies	9,199	109	—
New Zealand	103,416	1,881	18·2
New Zealand dependencies	1,656	93	—
United States possessions	7,402	632	—
EUROPE (exclusive of U.S.S.R.§)	1,903,369	391,902	205·9
Albania	10,629	1,300	122·3
Andorra	191	5	26·2
Austria	32,375	7,090	218·9
Belgium	11,783	8,614	731·1
British colonies and dependencies	124	337	—
Bulgaria	42,796	7,160	167·3
Czechoslovakia (1950)	49,330	12,463	252·6
Denmark (excl. Greenland, incl. Faeroe Islands)	17,109	4,261	249·1
Estonia	18,357	854	46·5
Finland (including Aland islands)	130,159	4,015	30·8
France	213,010	42,000	197·2
Germany (1950, including Saar)	138,017	69,382	505·2
Greece (including Dodecanese)	51,182	7,960	155·5
Hungary	35,893	9,201	256·3
Iceland	39,768	140	3·5
Ireland	26,602	2,991	112·4
Italy (1950)	116,224	46,001	395·8
Latvia	25,395	1,650	65·0
Liechtenstein	61	13	213·1
Lithuania	25,173	2,353	93·5
Luxembourg	1,010	295	292·1
Monaco	0·6	23	—
Netherlands	12,868	9,955	773·6
Norway (including Spitsbergen)	149,161	3,237	21·7
Poland (1950)	120,359	25,036	208·0
Portugal (incl. Azores and Madeira)	35,413	8,491	239·8
Rumania	91,654	15,873	173·2
San Marino	38	13	342·1
Spain (including Canary Islands)	194,945	28,023	143·7
Sweden	173,390	6,986	40·3
Switzerland	15,940	4,696	294·6
Trieste, Free Territory of	293	381	—
United Kingdom	94,205	49,919	529·9
Vatican City	0·5	1	—
Yugoslavia (after Sept. 15, 1947)	98,826	16,040	162·3
U.S.S.R. (1950 area, 1946 pop. est.)	8,436,188	193,000	22·9
NORTH AMERICA	9,375,934	217,192	23·2
British colonies and dependencies	21,060	2,751	—
Canada	3,843,144	13,845	3·6
Costa Rica	19,238	851	44·2
Cuba	44,217	5,400	122·1
Danish colony (Greenland)	840,000	23	—
Dominican Republic	19,129	2,400	125·5
French territory and departments	1,206	553	—
Guatemala	45,452	3,784	83·3
Haiti	10,748	3,750	348·9
Honduras	59,160	1,534	25·9
Mexico	760,373	25,368	33·4
Netherlands Antilles	403	165	409·4
Nicaragua	57,145	1,503	26·3
Panama	28,575	764	26·7
Salvador, El	13,176	2,150	163·2
United States	3,022,387	150,697	50·6
United States possessions	590,521	2,418	—
SOUTH AMERICA	6,856,054	108,465	15·8
Argentina	1,079,965	17,098	15·8
Bolivia	416,040	3,990	9·6
Brazil	3,286,170	50,000	15·2
British colonies and dependencies	90,681	410	—
Chile	286,323	5,761	20·1
Colombia	439,714	11,015	25·1
Ecuador	104,510	3,404	32·6
French Guiana	34,740	35	1·0
Netherlands territory (Surinam)	54,291	192	3·5
Paraguay	157,047	1,304	8·3
Peru	482,258	8,204	17·0
Uruguay	72,172	2,353	32·6
Venezuela	352,143	4,697	13·3

* In computing the world density the area of Antarctica is omitted.
† Includes Eritrea as military trustee area.
‡ Population of former Transjordan only.
§ Areas and populations of Estonia, Latvia and Lithuania included in 1950 and 1946 U.S.S.R. totals.

ARGENTINA. Second largest South American republic, occupying the southeastern portion of the continent. Area (excluding the so-called "Zona Austral" which is supposed to comprise the "Malvinas"; *i.e.*, Falklands, and other islands or territory in Antarctica): 1,079,965 sq.mi. Pop.: (May 10, 1947, census) 16,108,573; (mid-1948 est.) 16,300,000. The population is overwhelmingly European in origin (mostly Spanish and Italian, with Irish, German, Croat and Polish admixtures); in 1940 about 9% were of mixed blood, the dwindling Indian population was estimated at 262,600 and the total of foreign-born population was 2,355,900. The distribution of the population is uneven: the federal capital and the four provinces of the littoral (La Plata, Corrientes, Paraná and Sante Fé) cover only one-fifth of the total area but have two-thirds of the country's population; urban population is estimated at 75%. Language: Spanish. Religion: mainly Roman Catholic; Jewish 360,000. Chief towns (pop. 1947 est.): Buenos Aires (*q.v.*) (capital and leading port, 3,000,371); Avellaneda, a Buenos Aires suburb (279,572); Rosario (464,688); Córdoba (351,644); La Plata (271,738); Lanús (242,760); Santa Fé (168,011); Tucumán (152,508). President of the republic, General Juan Domingo Perón.

History. The Argentine national hero, General José de San Martín, died in exile in France in 1850. The year 1950 was officially dedicated to his memory, and it was decreed that on every day throughout the centennial year the words *Año del Libertador General San Martín* were to be added to the calendar date at the head of all newspapers and other printed matter. In January one hundred or more newspapers in Buenos Aires and the provinces were closed for varying periods by order of a congressional committee, on the pretext that they had failed to print the prescribed legend in their date-lines. Most of these publications happened to be newspapers which were known to be in some degree critical of President Perón's régime. The committee which performed this indirect censorship had been appointed originally to investigate "anti-Argentine activities" and was headed by José Emilio Visca. By taking control of the country's chief newsprint stock, Visca obtained almost complete power over the Argentine press, though *La Prensa*, in spite of considerable obstruction, managed to preserve its traditionally independent outlook. Visca's intolerance aroused indignation in the United States at a time when Argentina was badly in need of economic assistance from Washington. In March the U.S. assistant secretary of state, Edward G. Miller, visited Buenos Aires and indicated that if certain concessions were made to U.S. susceptibilities a dollar credit might be forthcoming. A few days later the Argentine minister of the treasury, Ramón A. Cereijo, concluding a two months' visit to North America, assured U.S. businessmen that Argentina would welcome private U.S. capital and would treat it fairly. In May it was announced that the Export-Import Bank of Washington would be willing to grant a credit of $125 million to a group of Argentine banks for the purpose of cancelling the debts which Argentine importers owed to U.S. firms. At the beginning of June the Argentine congress pointedly did not re-nominate Visca to his post on the committee of investigation.

To improve the balance of dollar payments the Argentine government also restricted imports from the United States and made a big effort to increase exports to that country. In the first half of the year exports to the U.S rose from the 1949 figure of 107 million pesos to 467·8 million, while imports from the U.S. were reduced from the 1949 figure of 372·8 million pesos to 321·6 million. The subsequent outbreak of war in Korea stimulated U.S. demand for Argentine products.

On July 17 the Ministry of Foreign Affairs published Argentina's reply to the appeal of the secretary general of the United Nations for support in connection with the Korean war The reply declared Argentina's willingness to fulfil her

obligations and added: " We are waiting for the unified command to enter into direct communication with the Argentine government." The publication of this message immediately provoked public demonstrations against Argentina's participation in hostilities. People marched through the streets of Buenos Aires and Rosario shouting " We want peace ! ", " Keep our children out of war ! " On the following day the Ministry of Foreign Affairs explained that the reply to the United Nations did not commit Argentina to send troops to Korea as that would require the sanction of congress.

For the national economy it was unfortunate that the far eastern war began in a year when Argentina's agricultural production was suffering from the effects of a serious drought and from the effects of the government's previous policy of encouraging urban industry at the expense of agriculture. Before the outbreak of hostilities it had already become apparent that Perón's industrialization projects still depended on the importing of equipment and fuel which, because of the evaporation of foreign currency reserves, could now only be paid for by increasing the export of Argentina's traditional pastoral and agricultural products. In April, therefore, the president launched a campaign for an increase in the sowing of cereals and announced the higher prices which the I.A.P.I. (Instituto Argentino de Promoción de Intercambio) would pay for the forthcoming crops. On June 7 Perón raised the official price of steers by 23%. In September and October further increases were announced in the prices at which I.A.P.I. would purchase cereals.

Throughout the year Anglo-Argentine commercial and financial negotiations were periodically broken off and resumed. Although trade between the two countries was substantial, there was great dissatisfaction on both sides. Because of the devaluation of sterling, Argentina now asked for £140 a ton for meat, whereas the United Kingdom offered £90. The Argentine authorities demanded compensation on their sterling balances existing at the time of the 1949 devaluation of the pound, but the British contended that no such balances existed at that date. The British negotiators complained that the Argentine government had only issued import licences for an insignificant quantity of non-essential manufactures and that there were enormous arrears of commercial and other debts owing to Great Britain for which remittance permits had not been granted. The Argentines replied that they had no sterling available for those purposes. On July 21, as no price agreement had been reached, I.A.P.I. instructed the local meat-packing organizations to cease shipping meat to the U.K. On Aug. 21 the Ministry of Economic Affairs announced new and higher minimum prices for light steers in preference to the heavy steers traditionally bred in Argentina for the U.K. market. The ministry stated that Argentine stock-breeders must now cater for European and South American markets where light steers were preferred, and that they must no longer cater only for the U.K. The suspension of shipments to the U.K., coupled with the difficulty of finding alternative markets, caused a great accumulation of meat in the packing houses, and on Oct. 18 the Ministry of Economic Affairs therefore authorized the packers to use their stocks of frozen meat for canning. At the end of November negotiations between the U.K. and Argentina were once again resumed in London and Buenos Aires.

On Aug. 28 the Ministry of Finance announced a simplification in the Argentine system of multiple exchange rates. The new system and rates represented a substantial devaluation of the peso. It was anticipated that this devaluation would assist the export of Argentine products and thereby enable Argentina to purchase from abroad the essential supplies which, under the influence of the Korean war, were becoming scarcer and more expensive.

The cost of living continued to rise during 1950, and many strikes occurred. The higher wages demanded by the strikers were invariably granted, and the popularity of the regime did not diminish. Provincial congressional elections took place in March, with satisfactory results for Perón's party. Colonel Domingo Mercante, a supporter and close friend of the president, was re-elected governor of the province of Buenos Aires. His Radical opponent, Ricardo Balbin, was arrested on polling day.

In September Perón made a speech in which he defined his policy as being ideologically " on the left, on the right, or in the centre, according to events." He said: " We are altogether anti-sectarian. We are anti-Communist because the Communists are sectarian, and we are anti-capitalist because the capitalists are sectarian too." The president stated that he had raised three great banners: " Economic independence, social justice and national sovereignty," and he named his policy *Justicialismo*, the policy of justice. (G. P.)

Education. Schools (1945): primary 14,294, pupils 2,064,464, teachers 79,741; secondary (1946) 1,145, pupils 221,409, teachers 28,360; universities (1943) 8, students 62,870.

Agriculture. Main crops ('000 metric tons, 1948-49; 1949-50 in brackets): wheat 5,170 (5,720); barley 610 (600); oats 700 (650); rye 250 (240); maize 4,600 (2,000); potatoes 850 (1,210); linseed 490 (600); sunflower seed 1,100 (800); groundnuts 100 (110); tobacco 26 (27); cotton, ginned 91 (93); rice 120 (110); sugar, raw value, 565 (549). Livestock ('000 head): cattle (1947) 41,268; sheep (1949) 45,000; pigs (1949) 3,500; horses (1949) 7,238; asses and mules (1949) 501; poultry (1949) 20,000. Meat production ('000 metric tons, 1949): beef 1,814. Wool production ('000 metric tons, greasy basis, 1948-49; 1949-50 in brackets): 209 (200).

Industry. Industrial establishments (1947) 101,884; persons employed in manufacturing industries (1949) 1,169,000. Fuel and power: coal ('000 metric tons, 1947) 32·9; crude oil ('000 metric tons, 1949; 1950, six months, in brackets) 3,200 (1,655); electricity consumption (million kwh., 1948; 1949, six months, in brackets) 3,072 (1,588). Raw materials ('000 metric tons, 1949): lead 18; zinc 19; sulphur 9; iron ore 22. Manufactured goods (main products, '000 metric tons, 1949; 1950, six months, in brackets): iron and steel products 154; cement 1,440 (776); paper pulp 37; rubber types ('000 units) 820.

Foreign Trade. (Million pesos, 1949; 1950, six months, in brackets) import 4,645·4 (2,278·1); export 3,717·5 (2,566·7). Main sources of imports (1949): Italy 16%; U.K. 15·6%; U.S. 14·8%; France 10·0%. Main destinations of exports: U.K. 22·8%; Brazil 10·9%; U.S. 10·7%. Main imports (1949): machinery and vehicles 21·5%; textiles 18·6%; iron and steel goods 16·3%; fuel and lubricants 10·7%. Main exports: meat and animal products 50·5%; agricultural products 45·0%.

Transport and Communications. Roads (1949): 20,082 mi. Licensed motor vehicles (Dec. 1949): cars 250,000; commercial 160,000. Railways (1948): 26,568 mi.; freight carried (1948) 43 million tons; passengers carried (1947) 335 million. Shipping (July 1949): number of merchant vessels over 100 gross tons 403; total tonnage 834,840. Air transport (1949, six months): mi. flown 3,996,721; passengers flown 132,538; cargo carried 302,004 tons; air mail carried 51,779 tons. Telephones (1949): subscribers 650,058. Wireless licences (1949): 2 million.

Finance and Banking. (Million pesos) budget: (1950 est.) revenue 4,870·0, expenditure 5,040·9; (1951 est.) revenue 4,844·1, expenditure 4,844·0. Budget of autonomous agencies (1950; 1951 in brackets): balanced at 5,022·7 (5,987·9). National debt (Dec. 1948; Dec. 1949 in brackets): 12,940 (15,408). Currency circulation (July 1949; July 1950 in brackets): 7,018 (9,174). Gold reserve (million U.S. dollars, July 1949; July 1950 in brackets): 167 (216). Monetary unit: *peso* with a free market rate (pre-devaluation, 1949; Nov. 1950 in brackets) of 19·38 (38·22) pesos to the pound and 4·81 (13·65) pesos to the U.S. dollar.

See J. C. J. Melford, *San Martín: The Liberator* (Oxford, 1950).

ARMIES OF THE WORLD. Three outstanding developments affected the armies of the world during 1950: on June 25 the army of North Korea invaded South Korea; the United States abandoned attempts to economize in its defence expenditure, passed a new draft law and began major shipments of arms to North Atlantic treaty nations while greatly expanding its own ground forces; and Chinese Communist troops intervened in Korea, and China launched an invasion of Tibet and built up forces in Kwangtung for a possible amphibious thrust at Formosa or support of the Communist forces in Indo-China.

The major changes in the disposition of the armies of the

world during 1950 resulted from the Korean war. Nearly all of the U.S. forces of occupation in Japan were sent to Korea, while most of the regular army troops in the United States were also sent to the far east. Within the United States the troops being sent overseas were replaced by conscripts and the activation of four national guard divisions. France continued to send additional troops, mostly colonials, to Indo-China. At the same time a gradual build-up of strength commenced among the North Atlantic treaty nations. There was little change in the disposition of the Soviet and satellite armies.

Great Britain. The international crisis forced Great Britain to modify its programme for economic recovery and concentrate on building up its armed forces. In July a three-year defence plan was announced, involving an expenditure of £3,400 million. Military service for men from 18 to 26 was extended from 18 months to two years and service pay was increased by as much as 75% for some ranks. Increases in pay would add another £200 million to defence expenditure. Great Britain was to expand its forces in Germany, and produce tanks, transport and heavy artillery for the Atlantic treaty army.

Disposition. Steps were taken during 1950 to increase the army by 55,000. This was to bring the 6½ divisions overseas to full strength. A new division, the 11th Armoured, was moved to Germany, joining the 7th Armoured and 2nd Infantry which were already in the British Army of the Rhine. British troop strength of about 50,000 was maintained in the middle east with a concentration in the Suez canal zone and with troops in Eritrea and Cyprus. There was the equivalent of two divisions in Malaya together with about 70,000 police of all types. Strength in Hong Kong was 40,000. In Korea the 28th and 29th brigades and supporting troops, including armour, fought as part of the United Nations forces.

Equipment. The 60-ton Centurion tank, which saw some service in Korea, was one of the best heavy tanks in the world, along with the Soviet Stalin Mark III. However, British production of the Centurion was only slightly more than 100 a year. (*See* BRITISH ARMY.)

United States. At the beginning of 1950 the U.S. army faced an economy programme, by which the number of troops would be reduced from 677,000 to 630,000. At this time about 20% of the strength of the army was allocated to "housekeeping" duties normally performed by civilian employees who had been dismissed during the economy drive. Consequently, when hostilities broke out in Korea the army had only about 596,000 men.

With the bulk of the regular army committed in Korea, the trend was completely reversed. The rate of military appropriations indicates the development of plans for U.S. rearmament. The appropriation for the army for the fiscal year 1950 was $4,407 million. With economy in mind the initial appropriation for the fiscal year 1951 (beginning July 1, 1950) was $4,018 million, a reduction of $389 million. The over-all defence appropriation for this period was $13,000 million. However, during 1950 congress passed two supplementary defence appropriations—the first for $11,000 million and the second for $15,000 million, bringing defence appropriations to more than $42,000 million or three times the original figure by the end of the calendar year. Of this amount approximately half was for the army and provided for a strength of 1,263,000 men.

At the outbreak of the Korean war in June 1950 the U.S. army had only ten active divisions. Of these, four were on occupation duty in Japan, one was in Germany and the rest were in the U.S. Two of the divisions in the U.S., the 2nd and 3rd Infantry, were sent to Korea and four National guard divisions—the 28th (Pennsylvania), 40th (California), 43rd (Connecticut, Rhode Island and Vermont) and 45th (Oklahoma)—were called to active duty. In addition the 196th (South Dakota) and 278th (Tennessee) Regimental Combat teams were called up. These units were to be brought to full strength with drafted men. Some non-divisional National guard units were mobilized to replace units of regular divisions sent overseas. The strength of the National guard at the start of the Korean conflict was 325,976 and included 27 divisions and 20 regimental combat teams. At that time the organized reserve had a strength of 185,000 and the volunteer reserve 337,000. By the end of 1950 more than 200,000 men had been inducted into the army under selective service, bringing the over-all ground strength to nearly a million. Plans called for the equivalent of 24 divisions to be organized by June 1951.

Disposition. Approximately half the U.S. troops, 314,000, were in the United States during the first half of 1950, and about 100,000 in Europe and 150,000 in the Pacific area. At the end of the year U.S. troop strength in the Pacific was considerably greater, the forces stationed in Europe increasing only slightly.

Steps were taken to transform the occupation forces in



Tanks of the French army taking part in manoeuvres, Aug. 30 to Sept. 1, 1950

Germany into a component part of the Atlantic treaty army. The 7th U.S. army was put on an active service footing with headquarters at Stuttgart. The first combat forces assigned to this army included the 1st U.S. Infantry division and constabulary units which were to be reorganized into an armoured division.

Training. The U.S. army began to put its stations on an active basis and modernize training areas necessary for handling an army of two to three times the size of the regular army in 1950. Initial plans called for the induction of about 80,000 men a month during the early part of 1951.

During 1950 three major training exercises were conducted. In February " Sweetbriar " was held in Alaska jointly with the Canadian army to test arctic equipment and technique.



Fifty-ton Centurion tanks of the British army, each carrying a 20-pdr. gun seen at Catterick camp, Yorkshire.

About 5,300 troops participated in a " mechanized march " across difficult Alaskan terrain to attack an airstrip held by an " aggressor " force. The U.S. 14th Regimental Combat team and elements of Princess Patricia's Canadian Light infantry, with some airborne troops, participated. " Portex," held in March, was the largest peacetime amphibious-airborne joint operation held up to the end of 1950. With about 80,000 U.S. army, navy, marine and air force personnel participating this exercise was designed to provide training in joint operations including airborne-amphibious techniques, to test under service conditions and to train the defence forces of the Caribbean command. In May " Swarmer " put to test a purely aerial invasion. Conducted with about 63,000 men and 375 planes, including the bulk of the 11th and 82nd Airborne divisions, this operation tested the practicality of capturing and supporting completely from the air a foothold in enemy-held territory. The operation proved that capture of an airhead was feasible and that airborne operations of a greater scope than any attempted in World War II could be mounted. The principal lesson from this exercise was that paratroopers needed to be protected from enemy tank attacks. Another training problem which received attention in 1950 was that of close support of ground units by tactical aircraft. An army air-support centre was established at Fort Bragg, North Carolina, to train air-ground teams.

Equipment. New tanks put into production during 1950 included a light tank, the T-41, weighing 28 tons, mounting a 76-mm. gun, with a speed of 35 m.p.h. The T-41 was stated to be superior to anything in its class, including the thinly armoured M-24 light tank which mounted a 75-mm. gun. An improved medium tank, the M-47, was also put into production. A development of the General Patton, the new tank had similar characteristics, such as a weight of 48 tons, a 90-mm. gun and a speed of 33 m.p.h.

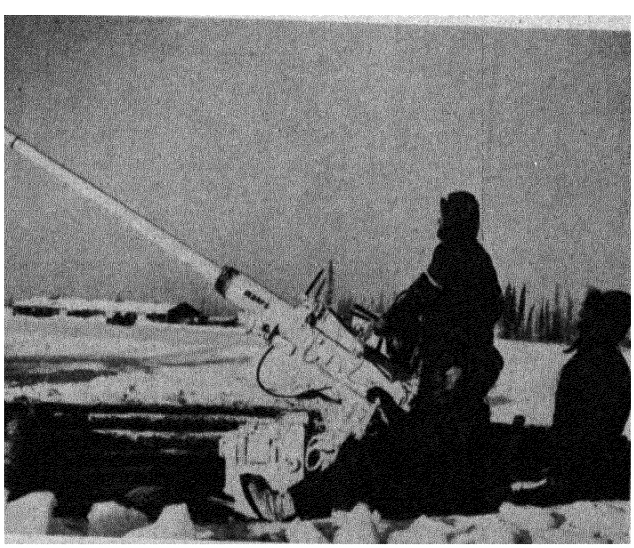
A new anti-tank weapon was also produced in 1950, a 105-mm. jeep-mounted recoilless rifle. This weapon was designed for infantry units, to be used with 5·5-in. bazookas and the 75-mm. recoilless rifle against armour.

U.S.S.R. There was little evidence of change in the over-all strength of the Soviet army in 1950. With about 100 divisions at full strength, and another 100 in cadres, the U.S.S.R. was maintaining about 2·5 million men on active service in the army. Because the proportion of administrative and supply troops was smaller in the Russian army than in the western armies, this number gave the U.S.S.R. a higher proportion of effective combatants than would usually be the case for this number of men in an army. The published defence appropriations for 1950 amounted to 19% of the total budget.

Disposition. No major changes in disposition of the Soviet army took place in 1950. About 30 to 35 divisions were maintained in Germany at full strength (11,000 for the infantry units). These divisions included six armoured formations and there were some unattached tank regiments. In addition there were six Soviet divisions in Hungary and Rumania and two in Austria. The exact number of units in Poland was unknown and it was apparent that a great concentration of strength could take place there almost unobserved. Bridges in the eastern zone of Germany were strengthened to carry the very heavy Stalin Mark III tanks. The strength maintained in the far east was 650,000 men.

Training. At least one special task force was trained during 1950 in arctic warfare technique. Large-scale exercises were held in Germany, although tank manoeuvres were believed to be restricted because of the deterioration of equipment. An analysis of the state of training and equipment in the Soviet army showed the following conditions: (1) Maintenance of mechanized equipment and armour was at its lowest ebb since World War II because of an extreme shortage of technicians. It was deduced that Soviet industrial expansion had received first priority for technicians and that the army was required to train its own mechanics. (2) There was a shortage of all forms of mechanized equipment. Tanks were old, trucks were scarce and in bad condition and there was a scarcity of self-propelled guns. (3) Armoured divisions lacked good radio equipment. (4) The physical condition, training and discipline of the troops were excellent. (5) Despite shortcomings the Soviet army was an extremely effective fighting force.

France. The length of military service was increased from 18 months to two years as part of the programme to expand the army to fulfil France's commitments under the Atlantic treaty. Plans called for the expansion of the army in Europe to a total of ten divisions in 1951 and at least five more in



An anti-aircraft gun crew of the United States army taking part in combined U.S.-Canada army manoeuvres in Yukon Territory, Canada.



Mule-train artillery of the bodyguard of the Dalai Lama of Tibet seen during field exercises in Lhasa, Oct. 1950, as the Chinese forces began their invasion of Tibet.

1952 and a further five in 1953. The defence budget totalled Fr. 740,000 million (28·5% of budget).

Additional financial support was promised by the United States, as well as arms and equipment.

Disposition. Three French divisions were engaged in occupation duties in Germany and Austria. Four additional divisional cadres were available in France and were to be fully manned in 1951. Reinforcements were sent from France and north Africa to Indo-China during the year. These included an armoured regiment equipped with Sherman tanks and an infantry regiment composed of battalions from the French Foreign legion and from Morocco and Senegal. French strength in Indo-China amounted to 150,000, of which about one-third was French, one-third colonial and the balance Vietnamese. About half the Vietnamese troops were well-trained; less than 10,000 were under Vietnamese officers, the rest having French officers.

Opposing the French and Vietnam forces in Indo-China were 150,000 Vietminh troops, a large proportion of whom had been armed and trained at the principal depot and supply centre of Nanning in southern China. Ho Chi Minh maintained 53 well-armed battalions and 50 lightly armed units of battalion strength in the vital Tongking area, where French communications to Hanoi and Haiphong were harassed.

The French continued to hold the vital areas around Hanoi, but expected a major drive to capture this rice-producing region. General de Lattre de Tassigny was named commanding general in Indo-China late in the year.

Equipment. France depended heavily on U.S. equipment both in Indo-China and metropolitan France. Production of armoured vehicles was increased but was still insufficient.

China. The strength of the Chinese Communist armies, like that of most Chinese armies, was very indefinite. There were probably about 3 million men under arms, of whom nearly half were in central Manchuria and North Korea. Mobilization was publicly decreed on Dec. 12, 1950, and there were indications that the Chinese Communists were apprehensive of a general war in Asia. In addition to the regular army, there was the People's militia of 2 million men.

Most of the remaining forces of Chiang Kai-shek were concentrated on the island of Formosa, although some guerrilla bands continued to harass the Communist forces, particularly in southwest China. Chiang's forces numbered about 400,000, although most of these had received only six to eight weeks' training and very few were properly equipped.

Disposition. There was an important shift in the disposition of the Chinese armies following the intervention of Chinese Communist units in the Korean war. The 4th Field army, with a strength of more than 500,000 men and one of the best in China, was moved from the south to Korea. To fill the gap left by this movement the 3rd Field army moved to cover the Indo-China border and the coast opposite Formosa. The 2nd Field army was reported to be in southwest China and there was some indication that the 1st Field army was in central Manchuria.

Organization. The strength of the Chinese divisions was 7,000 to 10,000 men each. These were organized into three infantry regiments. The Chinese divisions had few supporting services such as engineers, communications, reconnaissance, etc. Artillery support was limited. Three divisions were grouped into each army, and three armies into each group of armies. A field army usually had several groups of armies.

Equipment. Most small arms were old and of Soviet or U.S. origin. The Chinese had field artillery up to 155 mm. There were some U.S. light and medium tanks, and some Soviet small arms and medium tanks.

The Korean War. Military observers noted the following facts in the Korean war. The training of both North Korean and Chinese troops was good, with a strong emphasis on guerrilla and infiltration tactics. The strategy was similar to that used in the civil war in China—sudden attacks which faded away into the hills when they encountered opposition that was too strong. The leadership of the North Korean and Chinese forces was excellent and showed an ability to exploit any weakness and to take advantage of terrain. Soviet equipment stood up well under adverse conditions. Such equipment included a sub-machine gun with a drum-type magazine and high rate of fire, a 120-mm. mortar, jeeps and anti-tank guns. The T-34 tank had the field to itself until the U.S. General Patton tank with its 90-mm. gun arrived. (*See* KOREA; KOREAN WAR.)

The North Atlantic Army. Agreement was finally reached in 1950 among the powers of the Atlantic area over the details of establishing an international army for the defence of western Europe. This followed the creation in 1948 of Western Union (*q.v.*) with its five-power defence treaty for 50 years, and the signing in 1949 of the 12-nation North

Atlantic treaty. Although all the Atlantic treaty nations passed greatly augmented defence budgets in 1950, agreement on the individual contributions and the composition of the army was not reached until late in the year. Even then the rearmament of Western Germany continued to be a controversial subject among the North Atlantic treaty powers, and a final solution concerning Western Germany was not reached in 1950.

The following is a general indication of the number of divisions from the Atlantic treaty countries and Western Germany which were to be stationed in western Europe by 1953 (number of divisions in western Europe in 1950 in brackets): the Benelux countries, 9(2); France, 25(5); Italy, 18(8); United Kingdom, 7(2); United States, 10(2); total, 69(19). To support these units the U.S. appropriated $6,000 million in 1950 for equipment to be sent to the treaty nations.

On Dec. 19, 1950, General Dwight D. Eisenhower (*q.v.*), United States, was appointed commander in chief of the forces of the North Atlantic treaty powers.

Belgium. The army was reorganized to fit into the Atlantic treaty force. Three commands were established, one for the troops forming part of the treaty army, one for the defence of the national territory and one for maintenance and transport. Plans were made to send a full division to Germany to strengthen the Belgian corps, which consisted of two brigades in 1950. Compulsory service was extended from 18 months to two years. Strength of the armed forces was 75,000 but was to be raised to 150,000.

Italy. During the year Italy maintained about 100,000 men in the army; in addition there were 70,000 *carabinieri.* To build up sufficient forces for defence, the 8 existing divisions would be increased to 12; there would also be 2 armoured brigades. The development of the army was hindered by lack of equipment, which would, however, be forthcoming under the Atlantic treaty.

Netherlands. With the disbandment of the Netherlands Indies army, the Dutch commenced to build up their ground forces for the North Atlantic army. Supplies to arm one infantry division were to be received from Canada.

Eastern Europe. *Bulgaria.* One of the most advanced of the armies in the Soviet orbit, the Bulgarian army was reported to have 195,000 men under arms, although the treaty limit set a maximum figure of 55,000. The Bulgarian army was well-equipped with Soviet T-34 tanks. About 3,000 Soviet military advisers assisted with the training and organization of the army.

Czechoslovakia. The "Sovietization" of the Czechoslovak army was accelerated during 1950. Much emphasis was placed on discarding so-called French theories of defence and adopting so-called Soviet theories of the offensive. Most of the schooling, however, was based on the German tactics of armoured wedges and pocket fighting and the usual Soviet theory of mass attack. The army consisted of 135,000 men and had several hundred T-34 tanks.

Eastern Germany. The "People's Readiness squads" reached a strength of about 60,000 in 1950, but there were many desertions from these units. These troops were known to be given arms only during training periods. There was still evidence that the Soviet plan was to train the officers and enlisted cadres of the People's police to be used as the basis for a greatly expanded German army.

Hungary. The Hungarian army received considerable Soviet equipment in 1950. Measures were taken during the year to increase armament production. Army strength was reported to be well above the treaty maximum of 65,000. Military service was extended from two to three years. There were approximately 30,000 Soviet troops in Hungary.

Poland. The "Sovietization" of the Polish army neared completion as many new officers were commissioned from the ranks of agricultural and industrial workers and former officers dismissed as politically unreliable. The draft age was dropped from 21 to 20 and the length of service in the army increased to two years, followed by reserve service to the age of 50. The army numbered 250,000 men and included 16 infantry divisions. (*See* also POLAND.)

Rumania. One of the first satellite armies to be re-organized on the Soviet pattern, the Rumanian army consisted of approximately 200,000 men, well over the treaty limit of 120,000. In addition there were 30,000 Soviet troops in the country.

Yugoslavia. The strength of the army was 600,000, organized into 25 divisions. Its training was the best in Europe, but emphasized guerrilla tactics and mountain fighting to compensate for the lack of heavy equipment. Although fairly well equipped with small arms, the army lacked anti-tank guns, mortars, artillery and heavy weapons. Its armour consisted of a *pot-pourri* of tanks collected during World War II. A mountain guerrilla campaign, to be carried on by about a million men, was planned in the event of an attack.

Other European Countries. *Spain.* Although Spain took steps to modernize its army, including the weeding out of incompetent officers, the calibre of the force did not improve. Plans put into effect in 1950 included the training of a large number of soldiers and non-commissioned officers to form a cadre for a larger army in the event of mobilization. The strength of the army in 1950 was 250,000, organized into 22 divisions, but the mobilization goal was 2 million. For everything except small arms, Spain would be dependent on outside help. The existing equipment included artillery dating from 1938 and French and German tanks of pre-World War II types.

Sweden. A new record defence budget was planned at the end of 1950. This would increase expenditures from 17% to 19·4% of the budget. Full-scale manoeuvres were planned for 1951. On immediate mobilization, the strength of the army would be 700,000.

Commonwealth. *Canada.* An appropriation of $800 million for defence in addition to $300 million for new equipment supported not only the Canadian defence establishment and the expeditionary force to Korea but also forces of some of the Atlantic treaty nations. The army was maintained at 22,000 and a force of 10,000 was sent to Korea.

India. Although relations with Pakistan improved a little, the Kashmir situation continued to strain Indian defences. Approximately 50% of the budget was allocated to defence.

Pakistan. The army was maintained at the same level as in 1949, while defences were strengthened.

Middle East. *Egypt.* The reorganization of the army, begun after the disastrous fighting against Israel, continued in 1950. A new armoured division was formed and equipment ordered from western Europe and Great Britain.

Israel. During 1950 Israel turned more and more to western Europe for training and equipment, because requests to the United States were refused. Although lacking modern arms, Israel could mobilize 200,000 men in an emergency.

Persia. Faced with an increasingly tense situation along the Soviet-Persian border, the Persian army cancelled all leaves at the end of 1950. In the event of an attack it was planned to conduct a defence in depth with the 150,000-man army and to fall back to the mountains for the main battle.

Turkey. Army strength was reduced to 400,000, but combat strength was maintained by economies in manpower. The general staff, command and supply systems were re-organized on U.S. lines, and about 10,000 Turkish military personnel completed courses under U.S. instructors. Approximately one-third of the budget was for defence. During 1950 a

brigade was sent to Korea and proved to be extremely effective in combat. (*See* also BRITISH ARMY; KOREAN WAR; MUNITIONS OF WAR; NORTH ATLANTIC TREATY POWERS.) (E. L. S.)

ART EXHIBITIONS. The wealth of French art of over four centuries seen in London in 1950 was made available by the relaxation of import restrictions. French 19th-century painting was well represented: at Burlington house, by a part of the Burrell collection selected for circulation; by the first comprehensive assembly of Berthe Morisot's paintings (55 in all) to be seen in London; and at several private galleries. The Lefevre gallery opened its new premises in Bruton street, London, with an exhibition of Raoul Dufy's work, followed by one of Edgar Degas's. Many French contemporaries could also be studied, the best represented being the veteran Fernand Léger, to the phases of whose painting (cubist, " planes-in-space " and mechanistic) the Tate gallery devoted considerable space in the spring.

Also at the Tate gallery, " Modern Italian Art " was outstanding among exhibitions of contemporary art from overseas. Arranged by the Arts Council of Great Britain, the Italian institute and the Amici di Brera, this offered (with the important exception of that of Gino Severini) a fair representation of Italian art as far as concerned two sides of Futurist development: the *Scuola metafisica* (Giorgio de Chirico, Carlo Carrà, Amadeo Modigliani, etc.) and the *novecento* group (Arturo Tosi, Mario Sironi, etc.) but stopped short of the more recent *Fronte Nuova dell' Arte*. This latter it was hoped to represent later. Contemporary Italian sculpture was seen at the Italian institute in the autumn.

The opportunity of studying an aspect of modern American painting was afforded when the Institute of Contemporary Arts held in its new premises an exhibition of " Symbolic Realism in American Art 1940-50 "—a collection of minutely painted illustrations, surrealist or illusionist in character. Others whose work was shown in London, in some cases for the first time, were Max Ernst, Constant Permeke, Lovis Corinth, Claude Vénard, Marc Chagall and Pablo Picasso whose recent Provençal works included his extraordinarily inventive ceramics.

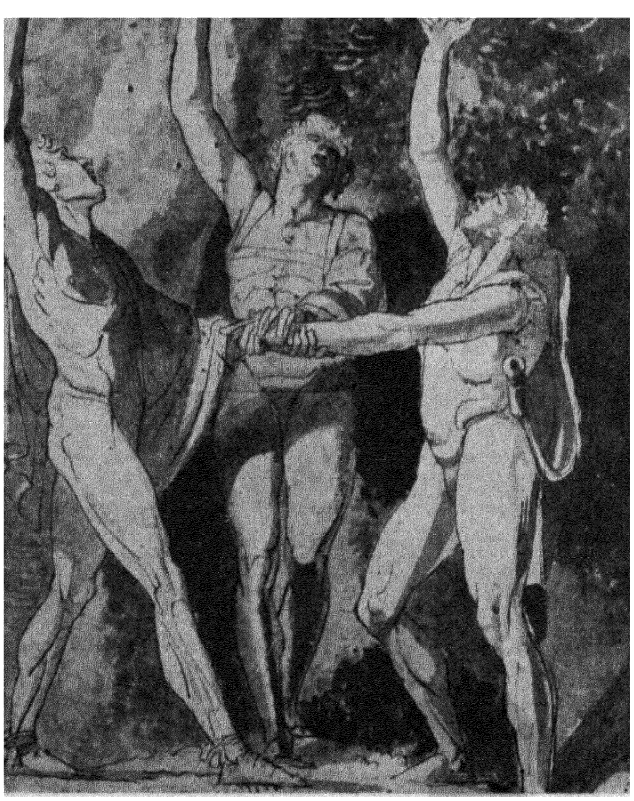
Exhibitions of old masters and antique works of art hardly rivalled those of 1949. Nevertheless " William and Mary and their Time," to which the King lent three tapestries, and which was the first considerable fruit of the Anglo-Dutch Cultural convention, provided an excellent portrait of an age. The Arts Council was responsible for the circulation of two old master collections, both including some little-known masterpieces, namely those lent by the Duke of Bedford from Woburn abbey and those from the Wellington gift. Rembrandt was the artist chosen by the Edinburgh Festival society for 1950, and 36 paintings were exhibited, including the sumptuous " Family Group " from the Count Anton Ulrich museum, Brunswick, later shown in London. In accord with the current romantic mood were Wildenstein's important and revealing exhibition of Rubens' portraits, decorative panels and drawings (many of them unfamiliar) illustrating the diversity of his genius; and the first London exhibition of paintings and drawings by William Blake's contemporary Henry Fuseli.

In " Painters' Progress," at the Whitechapel Art gallery, eight painters were invited to exhibit works illuminating the successive phases of his or her artistic career. Duncan Grant, Ivon Hitchens, John Piper, John Napper and Prunella Clough were among those selected. " The Private Collector," organized by the Contemporary Art society at the Tate gallery, and the exhibition before dispersal of part of the private collection of Howard Bliss, were most rewarding and showed the trend of enlightened collectors' taste; interesting also, not least for their historical associations, were the William Rothenstein and D. S. McColl memorial exhibitions, also at the Tate.

The Royal Academy of 1950, chiefly memorable for variations by Stanley Spencer (*q.v.*) on the theme of the Resurrection, reflected, in the greater influx of serious works and the dwindling of outworn features, the liberal policy of the new president, Sir Gerald Kelly (*q.v.*). The latter's one-man show at the Leicester galleries showed that his scrupulous craftsmanship was hardly paralleled in contemporary art. Two instances of overdue revival deserve mention: that of mural painting, by the constitution of the Society of Mural Painters; and of tapestry by the Edinburgh Tapestry society.

The 25th Venice *Biennale* was the highlight of the year's exhibitions of modern art, coming near to providing a cross-section of the contemporary achievement not only of Europe but of the western world. Twenty-one nations participated, five (Colombia, the republic of Ireland, Portugal, Brazil and South Africa) for the first time. John Constable, Matthew Smith and Barbara Hepworth were selected to represent Great Britain. The choice of 35 of Constable's works was generally acclaimed; that of 36 of Matthew Smith's with reserve, since many fell below the standard of his best. Barbara Hepworth's austerely formal sculptures were retrospectively arranged; her drawings were mostly recent.

If the British pavilion suffered from over-simplification, an *embarras de richesse* characterized the Italian. There were not only substantial assemblies of work by the signatories of the first *Futurist Manifesto*, memorial exhibitions honouring the sculptor Medardo Rosso, the engraver Cino Bozzetti and the painters Mario Broglio and Lorenzo Viani and shows of the painters Carrà, Pio Semeghini and Alberto Magnelli, as well as a section of modern sculpture, but also numerous contributions by less-known artists. The general effect was one of nervous vitality requiring self-discipline. The Swedish pavilion exhibited work of the painters Carl Hill and Ernst Josephson and the sculptors Sven Erixson



" The Oath of the Rutli," shown in 1950 in an exhibition of the works of Henry Fuseli at the New Burlington galleries, London.



" The Family Group " by Rembrandt, from the Count Anton Ulrich museum, Brunswick, exhibited during 1950 at the National Gallery, London.

and Bror Hjorth. Herbert Boeckl's one-man exhibition was the mainstay of the Austrian pavilion, while in the Belgian the work of Paul Delvaux, Edgard Tytgat and Constant Permeke supported the splendid memorial exhibition of James Ensor's painting. The French pavilion, carefully balanced, drew partly from the magnificent tradition which nurtured Pierre Bonnard, Henri Matisse, Maurice Utrillo, and Henri Rousseau (with a one-man show of each of these, and drawings by Georges Seurat) and partly from notable contemporaries such as Othon Friesz, Maurice de Vlaminck and others who passed through a *Fauve* period, with cubist paintings by Marcel Gromaire, Georges Braque, Juan Gris, Léger and Picasso, and the abstract sculptor Henri Georges Adam. The German pavilion concentrated on the " Blaue Reiter " group (of which such members as Wassily Kandinsky, Paul Klee and Franz Marc exercised a profound influence throughout the first half of the 20th-century) with, for sculpture, an impressive array of Ernst Barlach's carved wooden figures.

In Germany itself, though British drawings were seen in Berlin, exhibitions consisted mainly of mediaeval art and of that produced by important native movements, particularly the " Blaue Reiter " and the Weimar-Dessau *Bauhaus* groups (Lyonel Feininger, Oskar Schlemmer, Laszlo Moholy-Nagy, etc.). The " Great Art Exhibition, Munich 1950 " included 800 pictorial items, emphasizing the " Secession " and the *Neue Gruppe*. Switzerland (where too a Rembrandt exhibition was held at Schaffhausen) and Austria paid magnificent homage to the art of the middle ages.

The national galleries and museums made further progress towards recovery from the effects of World War II. At the Victoria and Albert museum, London, six more galleries, including the Islamic, were reopened. The famous Raphael cartoons (the surviving seven of the original ten) were again on view. Foremost of the individual acquisitions was Giovanni Lorenzo Bernini's baroque masterpiece " Neptune and Glaucus." The museum opened Ham house (consigned to its care) to the public and extended its scheme of loan exhibitions. Further rooms were opened at the National gallery and special air-conditioning in one gallery allowed the showing of masterpieces without glass. An important accession was a large composition by Bartolomé Esteban Murillo presented through the National Art Collections fund.

In Paris the reorganization of the Petit Palais proceeded apace, and at the Louvre an exhibition of the Madonna in French art was held after the rearrangement of the French paintings. Exhibitions of drawings from the Albertina, Vienna, of Yugoslav mediaeval art, of the first of the work of Eva Gonzales (a neglected Impressionist) and of paintings by the Mexican Rufino Tamayo, were among those held in France. The Palais d'Art Moderne initiated a Marc Chagall room. Throughout Europe, indeed, museums and galleries too numerous to record individually reopened in whole or in part, often after much reconstruction. New ideas in museum display generally demanded rearrangement, excellent British examples being provided at the Victoria and Albert, London, and at Brighton. Not only was large-scale reconstruction achieved in areas badly affected by the war (*e.g.*, Namur, Tournai, Bonn, Barmen and the Hamburg print-room) but new museums were installed and opened, such as the gallery of contemporary art at Céret and museums at Antwerp and Pisa. (*See* MUSEUMS.)

There was evidence of increasing interest in art generally, reflected in Great Britain in the acquisition of new premises by the Arts Council and the Institute of Contemporary Arts. Acquisitions of modern art by the Tate gallery included a *Fauve* Matisse, examples of Picasso's " Negro " and early cubist periods, and sculpture and drawings by Alberto Giacometti. The " native " part of this gallery's double role was nobly supported by the accession of John Constable's " Marine Parade and Chain Pier, Brighton " and of a group of William Blake's paintings and watercolours.

(N. A. D. W.)

United States. During the summer of 1950 the Philadelphia museum again brought before the public some 250 items from the rich private collections of the vicinity. The most important exhibits were " The Family " by El Greco from the Pitcairn collection; " José Romero " by Francisco Goya from the Tyson collection; and " On the Balcony " by Mary Cassatt from the Scott collection. Notable canvases by Paul Cézanne, Vincent Van Gogh and Pablo Picasso were also included.

In the autumn of 1950 the museum celebrated its diamond jubilee with a loan exhibition called " Masterpieces in America," comprising 102 paintings and 119 drawings covering eight centuries. They ranged from a " Crucifixion " by Fra Angelico to " The Three Musicians " by Pablo Picasso. A feature of the exhibition was " St. Peter Denying Christ " by Rembrandt lent by the Rijksmuseum, Amsterdam. Also included was the only work in the U.S. by Michelangelo, a red chalk study for the Sistine " Libyan Sibyl," lent by the Metropolitan museum, New York.

A special event at the National gallery, Washington, was the showing of 40 paintings, normally on loan to the National gallery, London, from the collection of C. S. Gulbenkian. Rembrandt's " Pallas Athene " was outstanding in the group as well as several important French 19th-century pictures.

The Corcoran Gallery of Art in Washington featured "American Processional" to celebrate the 150th anniversary of Washington as the U.S. capital. Important events in American history and life from 1492 to 1900 were depicted in paintings, drawings and a few prints. The portrait of Christopher Columbus by Sebastiano del Piombo formed the introductory note to the exhibition. Beginning with the end of the 17th century events were depicted by artists working in America.

New York's Museum of Modern Art held three notable retrospective exhibitions of the work of three highly diversified artists. The first was of the work of Paul Klee, the fanciful and highly imaginative Swiss artist who had much influence on contemporary art. Another was Charles Demuth, a sensitive American artist and facile water colourist. Finally, it gathered from collectors in Paris and in the United States, a comprehensive survey of the painting of Chaim Soutine, the French expressionist.

A whole gallery at the 25th Venice *Biennale* was devoted to the work of John Marin, doyen of American water colourists, and the work of six *avant garde* painters, Arshile Gorky, William de Kooning, Jackson Pollock, Hyman Bloom, Lee Gatch and Rico Le Brun, was also shown.

The Carnegie institute in Pittsburgh resumed its famous International exhibition after a lapse of 11 years. The jury was made up of Marcel Gromaire (Paris), Sir Gerald Kelly (London), the American artists Charles Burchfield and Franklin Watkins and the retiring Carnegie director, Homer Saint-Gaudens. First prize of $2,000 went to Jacques Villon (France) for "The Thresher," second prize of $1,000 went to Lyonel Feininger for "Houses by the River" and third prize of $800 to Priscilla Robert's "Self-Portrait."

New York's Metropolitan museum put on a handsome sampling of its American paintings ranging from John Singer Sargent's frothy and deftly painted "Wyndham Sisters" and Winslow Homer's vigorous "Gulf Stream" to work by contemporary artists. (*See* also ART SALES; ARTS COUNCIL OF GREAT BRITAIN; DRAWING AND ENGRAVING; MUSEUMS; PAINTING; SCULPTURE.) (F. A. Sw.)

ARTHRITIS. During 1950 Cortisone and ACTH consistently demonstrated an anti-rheumatic effect on many types of arthritis, especially those of inflammatory nature and particularly rheumatoid arthritis.

New developments in the manufacture of Cortisone and ACTH during the year resulted in a substantially increased supply at a considerably lower cost. The practical application of these hormones in the treatment of rheumatic patients was accomplished in some acute rheumatic illnesses such as rheumatic fever and gouty arthritis. Their use in chronic illnesses such as rheumatoid arthritis was still problematical. It was found that this disease is not eliminated by a short period of administration of Cortisone or ACTH, although it may be completely suppressed. When the hormone is discontinued the disease almost invariably recurs and usually presents the same problems that existed before treatment. In an effort to obtain more permanent benefits, trials of repeated short periods of hormone treatment, separated by periods without the hormone, were made. Such treatment failed. Many medicines were used immediately following Cortisone or ACTH with the hope that they would sustain the benefits of the hormone, but none was successful. Studies of long periods of continuous Cortisone or ACTH therapy for rheumatoid arthritis were being made. The results indicated that in some patients it seemed reasonable and possibly desirable, in others it was impractical because effects of the hormone other than the anti-rheumatic effect sometimes produce complications and make the treatment unsafe. These other effects include hormonal and metabolic changes which may result in diabetic changes, oedema, hypertension, central nervous system changes which result in depression or excitement, and bleeding tendencies which may cause severe haemorrhage. Also, long use of the hormones may decrease the functioning of the patient's adrenal or pituitary glands. This may cause undesirable glandular changes when the hormone is discontinued, resulting in withdrawal symptoms of weakness, stiffness and depression; this is in addition to the worsening in the arthritis which usually occurs even after long use of the hormones. These complications are important factors which make prolonged use of Cortisone and ACTH difficult and sometimes impossible.

Cortisone is effective by mouth and in general has the same effects as when given by intramuscular injection, as formerly required. Tablets of Cortisone became available during the year, making treatment simplified and less expensive.

A principal difficulty in the use of ACTH was the requirement of injections of this hormone several times each day; this was necessary because of the short period of effectiveness of available preparations. Efforts were being made to develop a form of this hormone which could be slowly and uniformly absorbed so as to require injection only every 48 or 72 hr. and thus facilitate its use in ambulatory patients. The developments were encouraging.

Many steroids were produced, chemically similar to Cortisone. These were intensively studied, and investigation was continued with the hope of developing an effective substitute for Cortisone, a substitute which would have few complicating subsidiary effects. An outstanding example of these drugs was pregnenolone. Reports concerning its effectiveness varied widely. It seemed to have much less anti-rheumatic effect than Cortisone. Many investigators found this drug to be of little or no value in the majority of trials, but because it had little toxicity, efforts were continued to determine if this steroid could be made more effective.

Intensive research into the cause and mechanism of rheumatoid arthritis, and in ways to improve physical measures of treatment, pain-relieving drugs and other well-established forms of treatment was also being carried forward. (*See* also ENDOCRINOLOGY.)

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ART SALES. The year 1949 had ended at Christie's with the sale of four remarkable drawings, one by Pisanello (2,300 guineas), one by Brueghel (1,800 gns.), one by Fra Bartolommeo (540 gns.) and the last by Boucher (480 gns.). The first spectacular sale of 1950 was at Christie's in February when some important Dutch paintings from the collection of the late Colonel H. A. Clowes were sold: "A Girl at her Toilet" by Metsu brought 4,000 gns. and a fine beach scene by Jacob van Ruysdael 5,900 gns. In March Sotheby's offered an interesting pair of panels of St. Sebastian and St. Roch by Lucas Cranach, the outer sides of a destroyed triptych, which realized 1,000 gns. In March also Christie's sold a Wilson Steer, "View of Shoreham" for 20 gns., a Charles Spencelayh for 200 gns. and a Utrillo for £183 15*s*. On April 3 a 14th-century Parisian missal reached £5,000 at Sotheby's and at the same sale 177 letters from Charles Darwin were sold for £5,200 and a draft of Acts I and II of Wilde's *The Importance of Being Earnest* for 400 gns. A surprise item in the sale of April 26 was a half-length portrait of a Carmelite

monk attributed to Rubens. This brought £4,000 and another portrait, attributed to Lorenzo Lotto, brought £600.

At Christie's on May 12 a small landscape on panel attributed to Rembrandt provoked a lengthy struggle among the dealers and was knocked down for 6,200 gns. A double portrait by Ferdinand Bol was sold for 850 gns. and 1,950 gns. was paid for a Samuel Scott view of the Thames at Westminster. In May some modern masters at Sotheby's made interesting contrasts; the highest price (£300) was paid for a Vuillard gouache and oil on panel but drawings by Modigliani (£68), Matisse (£66) and Rodin (£22) showed the more general level of the year for works of this kind. On June 7 a painting of the Capel family by Cornelius Johnson realized the very respectable price of 2,000 gns. A fortnight later a number of important paintings and drawings came up for sale at Sotheby's. These included a double sheet of drawings by Goya which had been sold in 1935 for £145 and now brought £680, a Valasquez portrait of Queen Isabella (£1,500), an Emmanuel de Witte of the synagogue at Amsterdam (£1,200), and a Hogarth portrait of Dr. Hoadley (£450).

Two days later a sale at Christie's produced some curious results: a Gainsborough portrait realized 650 gns., a Samuel Scott 220 gns. and two views of Dresden by Bernardo Belotto 3,800 gns., though they had been bought four years ago for nearly a thousand pounds more. An early Munnings " The Gravel Pit " secured a purchaser at 80 gns. Early in July " A Street Scene " by Utrillo brought 620 gns. and three Fantin-Latours together realized nearly £3,000. A Corot woodscape was sold for 2,100 gns. The big event of this month was the Clinton sale at Sotheby's. Rembrandt's " The Flight into Egypt " was sold cheaply at £10,000. A fine Zuccarelli brought £700 and a Jan van Goyen view of Arnhem £1,500. At Christie's the sale of pictures from the collection of Alan G. Fenwick produced some very high and some very low prices. Mabuse's " Madonna and Child " brought £3,400 and a Simone Memmi £70.

When the season opened again in late September a sketch by Constable was sold at Christie's for 16 guineas and an early 18th-century Italian drawing for 6 gns. The disposal of 238 lots from the collection of the late Henry Harris at Sotheby's a few weeks later realized more than £28,000. Outstanding items were a fountain head by Giovanni Francesco Rustici bought by a private collector for £3,200 after the Victoria and Albert museum had underbid for it. Many early Italian paintings went back to their homeland. A week before, at the same saleroom, a Jan van Goyen had been bought for 3,000 gns. and a Fantin-Latour for £2,600. The most important items in November sales were a Rembrandt belonging to the late Lord Holford which Sotheby's sold for £21,000 to a Dutch collector and a small panel at Christie's of a young man attributed to Rogier van der Weyden but thought to have been the work of another artist, possibly Fouquet.

Europe. In the European market sales were not as brisk as in England. In France, in June, 1,170,000 francs, a record price, was paid for a pair of chairs at the Hôtel Drouot. An important and unusual sale was that of the contents of the Château de Tourronde, near Lugnin: paintings by Murillo and a series of royal portraits were among the most important items, and many of these were acquired by the Prince of Monaco.

In Milan, at the Galleria del Bramante in July, a Guardi sold for 220,000 lire, a sign of the general weakening of prices. One of the curious things was that, in spite of the concern about the " forged " Utrillos, that artist's works continued to command high prices. In July one which had been bought a few months previously in England for 175 gns. was sold in Paris for 240,000 francs and some time later another was sold for 800,000 francs.

Many prices rose: a Boudin sold for 910,000 French francs, ten times as much as it cost 50 years earlier; a Seurat sold in Paris for 191,000 francs in 1949 and was sold 12 months later for 450,000 francs; Picassos of all periods were selling very well; Renoir was a good steady seller; Gris, Vuillard, Roger de la Fresnaye (one sold for 700,000 francs) were markedly successful. One of the most marked features of the year was the improvement in the sale of those 19th-century masters who do not come within any of the well defined movements.

There were several sales of important collections: at Brunswick in March 80 paintings from the collection of the Duke of Brunswick-Luneberg were disposed of at prices which were not remarkable, and the following month saw the sale at Brussels of several important items from the collection of M. Burthoul. In Brussels also, a month earlier, a Rubens, " The African Magi," sold for the equivalent of £1,700. (*See* also ART EXHIBITIONS). (B. DR.).

ARTS COUNCIL OF GREAT BRITAIN.

The Arts Council in 1950 was concerned increasingly with preparations for the Festival of the Arts, a part of the Festival of Britain 1951. By the end of the year most of the detailed plans had been made and the programmes of the individual festivals in different parts of the country had been distributed to the press all over the world. In addition, the outline programme for the London Season of the Arts, which was designed as a concentration of the finest national productions in music, theatre, opera and ballet, and the visual arts, in May and June 1951, had been given its main shape.

There was some valuable co-operation between local authorities and the Arts Council during the year. The most encouraging example was that of the Bristol corporation which undertook, for the first time, financial support for the city's Theatre Royal, the oldest theatre in the country, which the Arts Council had managed since 1942. The trustees who own the theatre, the Arts Council as managers, and the corporation representing the citizens of Bristol thus came together for the first time in active co-operation for the running of the theatre, which was now also the home of an Old Vic company.

In Jan. 1950, the report was published of the House of Commons Select Committee on Estimates, which had enquired into the council's work on the basis of evidence submitted during the autumn of 1949. The conclusions and recommendations of the committee were positive and encouraging, although they suggested that overheads were higher than they need be and they queried the amount of money spent in grants to metropolitan ventures as opposed to provincial ones. Both these points were answered in a reply, published later in the year, where it was explained that the council's administrative costs were incurred by no means only for the machinery of giving financial help but, to a very large extent, for the purpose of providing technical help and advice apart from money to the many enquirers, corporate and individual, who approach the council for help. It was also explained that the subsidies given for London theatre companies, orchestras and art exhibitions must, in the nature of things, be larger in amount than the grants given to corresponding bodies in the provinces, and the following figures were given to show the actual number of ventures financed outside London during the previous year: 111 Arts Council exhibitions in 257 places outside London, 156 music societies guaranteed against loss, 63 arts clubs associated with the council and receiving help of some kind and 417 plays given with the council's support by 28 different companies. (M. C. G.)

ARUBA: *see* NETHERLANDS OVERSEAS TERRITORIES.

ASCENSION ISLAND: *see* SAINT HELENA.

ASSASSINATIONS. Actual or attempted assassinations during 1950 included the following:

Feb. 20. Mexico City. Jose Gallostra, Spanish minister to Bolivia, was shot dead.

March 3. Saigon, Indo-China. Do Van Nang, leader of the Vietnamese youth movement, was assassinated.

March 9. Beirut, Lebanon. Tewfik Hamdan, a Syrian Nationalist, fired several shots at Riad Bey es Sulh, Lebanese prime minister, at a banquet. Riad Bey escaped injury, but several of the other guests were killed or wounded. The assailant was condemned to death on May 23.

April 28. Singapore. A grenade thrown at Sir Franklin Gimson, the governor, exploded harmlessly.

April 28. Saigon, Indo-China. Marcel Bazin, deputy chief of security services in southern Vietnam, was shot dead by a Vietminh rebel.

June 5. Saigon, Indo-China. Vuong Quang Nhuong, Vietnam minister of education, was wounded when an assailant fired at his car.

July 3. Saigon, Indo-China. Truong Van, editor of the Vietnamese nationalist newspaper *Anh Sang*, was shot by a terrorist at his home.

July 18. Saigon, Indo-China. Henri Bonvicini, editor of *Saigon Presse*, was shot and seriously wounded.

July 31. Damascus, Syria. Lieut. Colonel Mohammed Nasser, c. in c., Syrian air force, was shot by unidentified assailants; he died in hospital.

Aug. 18. Seraing, near Liége, Belgium. Julien Lahaut, Communist leader, was shot dead by two unknown persons.

Oct. 30. Beirut, Lebanon. General Sami Hinnawi, who organized the *coup d'état* in Syria on Aug. 14, 1949, was shot dead at a tram stop. A Syrian was arrested.

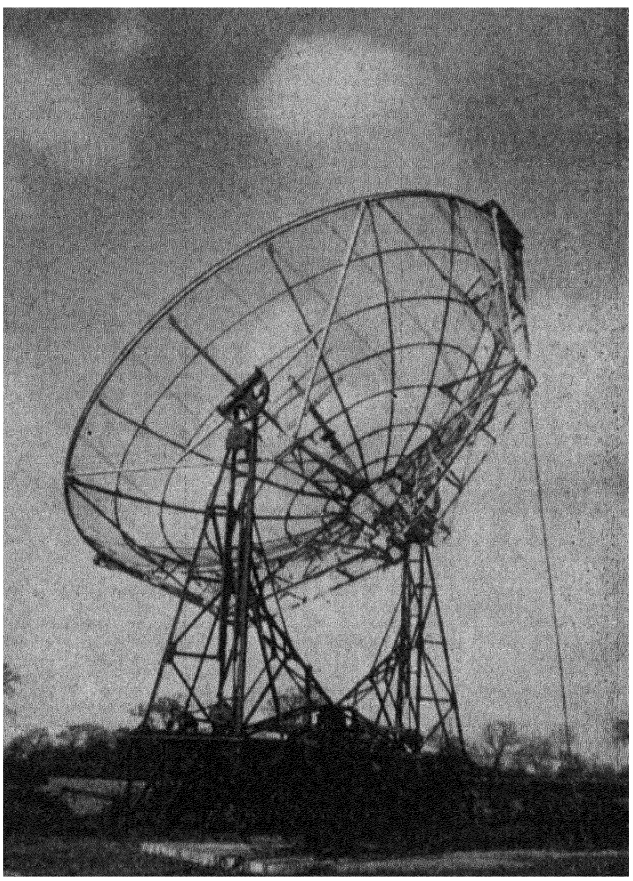
Nov. 1. Washington, D.C. Two Puerto Rican nationalists tried to shoot their way into Blair house, President Truman's temporary residence. One was shot dead and the other wounded by the guard.

Nov. 13. Caracas, Venezuela. Lieut. Colonel Carlos Delgado Chalbaud, acting president, was shot dead. General Rafael Urbina, leader of the assassins, was later killed while trying to escape from custody.

ASSOCIATION FOOTBALL: *see* FOOTBALL.

ASTRONOMY. Solar System. For times of expanding horizons in astronomy, the solar system received unusual attention in 1950. As the first discovery regarding the system made with the 200 in. Hale telescope at Mount Palomar, California, G. P. Kuiper found the diameter of Pluto, the outermost known planet, to be about 3,600 mi. The surprising consequence was, assuming a "normal" density, that Pluto's mass would be about one-tenth of the Earth's. On the other hand, the perturbation of Neptune which had been ascribed to Pluto had previously given the mass of Pluto as about nine-tenths the Earth's. Kuiper also announced that observations (at the McDonald observatory, Texas) had yielded a diameter of 27,700 mi. for Neptune, the long-accepted value having been 31,000 mi. The asteroid discovered in 1949 by W. Baade, using the 48 in. Palomar Schmidt camera, was given the name Icarus. Its calculated orbit showed that it made the nearest approach to the Sun of any known member of the solar system; so the perturbations of the orbit were expected to yield an improved determination of the mass of Mercury.

Analysis of the performance of a number of quartz-crystal clocks used for the Greenwich time service was interpreted by H. F. Finch as showing an annual fluctuation in the rate of rotation of the Earth such that, relative to uniform time, it is about 0·06 sec. slow in spring and about the same amount fast in autumn.



A 30-ft.-aperture steerable paraboloid used in radio astronomy at the Jodrell Bank Experimental station, Cheshire.

A fresh discussion by G. M. Clemence of all the observational evidence showed that the relativity effects in planetary orbits agreed well with the predictions of Einstein's theory. This was important because other predictions, whose agreement with observation was still in doubt, concerned the behaviour of light; it was more understandable that Einstein's theory might be deficient in this regard, than in its treatment of planetary motion.

J. H. Oort gave a new theory of the origin of comets, briefly as follows. At some time in the past a planet between Mars and Jupiter exploded into fragments, a small proportion forming the meteors and asteroids. Of the main bulk, about 90% was lost into interstellar space, but some 3% was thrown into orbits having large major axes up to about 200,000 astronomical units. These latter constituted a store of some 10^{11} comets at an average distance of about 150,000 astronomical units from the Sun. At such distances, perturbations produced by other stars continually give some of them velocities that bring them into the vicinity of the Sun and so form, in the first instance, what are observed as long-period comets. Some of these are in turn perturbed by the planets so as to become short-period comets.

The quantitative results agreed with observation in a satisfactory way and accounted for some hitherto unexplained cometary phenomena. Oort utilized much known work, his own important contribution being to demonstrate the significance of *stellar* perturbations of cometary orbits.

Two years previously, W. H. Ramsey had given a new theory of the internal constitution of the Earth, according to which the existence of a "core" is due to a phase change of the material to a metallic state, brought about by pressure, and not to a variation of chemical composition. He had extended the theory to other terrestrial planets. In 1950 he

and M. J. Lighthill elaborated it to show that a planet in a certain mass-range could pass catastrophically from one internal configuration to another. This could have happened to the Earth or Venus and was tentatively suggested as the " explosion " that produced the meteors in the solar system (though it could scarcely have been sufficiently energetic for the other requirements of Oort's work). Ramsey also extended his treatment of the behaviour of matter under pressure so as to obtain an apparently satisfactory theory of the constitution of the major planets, which also gave fresh light on the relation between the planetary and white-dwarf states of " cold " matter.

Sun. D. H. Menzel gave a comprehensive theory of the motion of ionized matter in a weak general magnetic field of the Sun. He supposed such a field to exist and derived a rather complex picture of the behaviour of the Sun's outer atmosphere. This, he suggested, is being continually replenished by material ejected near the poles by the " spicules " discovered by W. O. Roberts, the material returning to the Sun's surface along paths determined by electromagnetic forces. Menzel suggested that the termination of some of these paths produce sunspots and that the downward moving material itself forms prominences of the various sorts that he had re-classified on the basis of the cinematography of solar activity carried out by him and his colleagues at Climax (Colorado, U.S.A.). However, besides the difficulties of the electromagnetic theory, there was that of knowing whether all the material of the prominences, etc., was being observed, or only a part whose physical condition happened to render it more luminous.

Theories were current which, contrary to earlier ideas, tentatively ascribed *cosmic rays* to a solar origin. Also some observations showed an apparent dependence of cosmic-ray intensities upon solar activity. If substantiated, this might not, however, show that any cosmic rays come from the Sun. It might only show that the disturbance, due to solar activity, of the magnetic field near the Earth affects the paths of rays coming from elsewhere.

Stars. The huge distension of red giant stars had long been a perplexity to astrophysicists. F. Hoyle and R. A. Lyttleton, Li Hen and M. Schwarzschild, and C. M. and H. Bondi explained it by a non-uniformity of composition. According to their calculations, a red giant has an outer region containing a small percentage of the mass composed mainly of hydrogen, the rest of the interior having a large helium content, and this model has a far greater radius than that of the same material if uniformly mixed. The helium was presumed to be that produced by the transmutation of hydrogen in the energy-generating process, but the origin of the two regions required further investigation.

H. D. Babcock, who in 1947 had published the first measurement of the magnetic field of a star that had ever been made, was able by 1950 to announce that he had detected a general magnetic field for at least 25 stars. He estimated the fields by polarization measurements on the spectra. It had to be supposed that the field would be detected only if the magnetic axis were fairly near to the sight-line. The polar magnetic fields were found to be several thousand gauss (that of the Earth being 0·6 and of the Sun, if any, less than about 50 gauss). Babcock found the field to be usually variable and in four stars to be periodically reversed in polarity. One suggestion was that the magnetic axis makes a large angle with the axis of rotation, so that the " magnetic aspect " of the star varies during rotation.

The spectra of the stars exhibiting a magnetic field showed certain peculiarities. Some of these might be explained, were it possible for the star, as it rotates, to present to view regions of different chemical composition.

Radio Astronomy. The localized sources, discovered a few years previously, of some of the *galactic radio-noise* came to be called " radio-stars." The view was gaining ground that a large proportion of all the " noise " came from such sources, those individually recognized being the nearest or most intense. Australian workers obtained possible identifications of three such sources with positions of certain galactic nebulae, but the majority were not identifiable with any known objects in the sky.

The intensity of a " radio-star " observed at a particular station had been found to show rapid fluctuation. Comparing simultaneous observations at different stations, British workers showed that this is some form of " twinkling " caused by the Earth's atmosphere. C. G. Little gave a new diffraction theory of twinkling applicable both to this and the more familiar optical phenomenon.

A. Unsöld suggested that " radio-stars " may be stars of some unusual kind, probably of low luminosity and low surface temperature, but with disturbed regions in their surface layers. Others thought that they may be normal stars, emitting radio waves in the same way as the Sun, but with much greater intensity. Yet others suggested that the radio waves come from electrons trapped in a star's magnetic field and not from a star itself.

General. The progress reported in an article like this, which is only a selection from much material, tends to be that depending upon special observations and related theories. In general, however, the special observations could be interpreted only by using the results of the basic programmes of work being carried out by observatories all over the world, often with international co-operation. Though these results, comprising tables, catalogues, spectroscopic data and various standards, receive little mention, it must be appreciated that they represent a large proportion of any year's work in astronomy. To cite only two examples: Yale university observatory announced the completion in 1950 of a catalogue of the positions and proper motions of about 128,000 stars in particular zones of the sky; the work had taken 23 years and had utilized about 500,000 measurements. Charlotte E. Moore, in continuation of previous work, published an extensive ultra-violet multiplet table for selected spectra of the first 23 elements in the periodic table.

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ATHLETICS. Two great athletic gatherings, both of them convened only once in the four-year span of an Olympiad, were the highlights of the 1950 season: in February the fourth Empire Games (*q.v.*) were staged at Auckland, New Zealand; and in August more than 400 athletes from 23 countries, including the U.S.S.R., competed in the fourth European Games at the Heysel stadium outside Brussels.

The chief surprise at the European championships was the failure of the Swedes in events such as the 1,500 m. and the steeplechase, which had long been regarded as their strongholds; in contrast the national teams of Finland, France, Italy and Great Britain acquitted themselves notably. Eleven countries between them supplied the victors in the 24 men's and 10 women's titles down for decision. In the men's events Czechoslovakia, France and Italy each won three titles, and Great Britain secured six. The U.S.S.R. won four women's titles, the Netherlands four (through the individual brilliance of F. E. Blankers-Koen), Britain two and France one. On a combined reckoning Great Britain, whose representatives also won three silver and six third-place medals, came out in front with eight gold medals in all, against the U.S.S.R.'s six and France's and the Netherlands' four each.



E. McDonald Bailey, Great Britain, (left) winning his 100 yd. event in the triangular athletic contest between Great Britain, the Benelux countries and the United States at the White City, London, Aug. 1950.

The high standard of competition at Brussels was well reflected because in nine events the winning performances were superior to the Olympic records. There were signs of a coming challenge to American supremacy in events which have had no great tradition among the European countries. Long-distance track events and javelin-throwing have always been the preserve of the European; but it now seemed that a threat was developing in such events as the pole vault and the 400 m. hurdles.

The outstanding figure of the European championships was the prodigious Czech athlete, Emil Zatopek. In the 10,000 m. winning by almost a lap, he beat his own listed world's record of 29 min. 21·2 sec. by 9·2 sec. The next day, winning his heat, he qualified for the 5,000 m. final; and there he met the Olympic champion, Gaston Reiff of Belgium. Reiff had to give up the unequal struggle when Zatopek tore past him in the penultimate lap, to record a time beaten only by G. Hägg, the Swedish world's record-holder.

E. Bally (France), winner of the 100 m., was deprived of a second victory in the 200 m. by the fine sprinting of Britain's last-minute substitute, B. Shenton. This unexpected success was supported by further British victories in the 400 m. and 800 m. by D. C. Pugh and H. J. Parlett, who made records of 47·3 sec. and 1 min. 50·5 sec. In the 1,500 m. the world record-holder, L. Strand (Sweden), was overcome by nervousness and left the track when only 300 m. had been covered; and W. F. Slykhuis (Netherlands) won in the record time of 3 min. 47·2 sec.

The favourite, A. Marie (France), won the high hurdles in 14·6 sec. with J. Bulanchik (U.S.S.R.), who had reputedly returned 14·2 sec. in his own country, a disappointing fifth. The longer hurdling event over 400 m. was dominated by the Italian A. Filiput, who won in the record time for the 16 years of the championships, 51·9 sec. Two months later Filiput broke the world's hurdle record for the longer 440 yd. race (52·2 sec. jointly held by the Americans L. B. Cochran and R. F. Ault) at Milan with another run in 51·9 secs. The standards achieved in the field events at Heysel, except in the long jump, were excellent: in the case of the hammer- and discus-throwing they surpassed those at Wembley during the 1948 Olympic Games.

BRITISH ATHLETIC PERFORMANCES, 1939 AND 1950

Event	Best Performance		Tenth Best Performance	
	1939	1950	1939	1950
100 yd.	9·7 sec.	9·5 sec.	10·1 sec.	9·9 sec.
220 yd.	21·8 sec.	21·0 sec.	22·2 sec.	22·2 sec.
440 yd.	47·6 sec.	47·6 sec.	50·4 sec.	49·6 sec.
880 yd.	1 min. 52·1 sec.	1 min. 51·2 sec.	1 min. 57·0 sec.	1 min. 54·7 sec.
One mile	4 min. 07·4 sec.	4 min. 06·8 sec.	4 min. 21·6 sec.	4 min. 16·6 sec.
Three miles	14 min. 08·0 sec.	14 min. 11·2 sec.	14 min. 38·0 sec.	14 min. 26·4 sec.
High hurdles	14·7 sec.	14·7 sec.	15·9 sec.	15·6 sec.
Quarter-mile hurdles	55·4 sec.	53·0 sec.	59·2 sec.	57·2 sec.
High jump	6 ft. 2¾ in.	6 ft. 7 in.	5 ft. 11 in.	6 ft. 1 in.
Pole vault	12 ft. 7 in.	13 ft. 0¼ in.	11 ft. 3 in.	11 ft. 3 in.
Long jump	23 ft. 10½ in.	24 ft. 2¾ in.	23 ft. 0½ in.	23 ft. 1 in.
Hop, step and jump	47 ft. 3 in.	48 ft. 5¾ in.	44 ft. 1½ in.	45 ft. 6 in.
Shot-put	46 ft. 1¾ in.	51 ft. 11½ in.	42 ft. 0½ in.	44 ft. 7 in.
Discus	144 ft. 6 in.	154 ft. 6½ in.	127 ft. 0 in.	137 ft. 5 in.
Hammer	165 ft. 7½ in.	180 ft. 1¼ in.	133 ft. 7½ in.	139 ft. 1 in.
Javelin	202 ft. 2¾ in.	202 ft. 4½ in.	166 ft. 10 in.	177 ft. 8½ in.

In this season Great Britain complied for the first time with the standard European practice of extending dual international meetings over two days. In its first such meeting Britain defeated France in Paris by 106 points to 99. A week later Sweden defeated France by a margin of three points, thus leaving the problem of current European supremacy unresolved. The Swedish national sporting paper *Idrottsbladet* however, in a hypothethical international match between Britain and Sweden, acknowledged a defeat by 14 points.

Great Britain's athletic recovery may perhaps most succinctly be judged by comparing the achievements of 1939 with those of 1950. (*See* Table).

The table, in which to give a truer picture allowances have been made for performances over metric distances, clearly shows that, with the single exception of the best 1939 three miles, every other one of that season's leading performances were equalled or surpassed in 1950; and this already significant overall trend would soon receive the full impact of the Amateur Athletic association scheme carried out under 900 qualified honorary coaches. (N. McW.)

United States. Jim Fuchs, Yale university and New York Athletic club, who won the five national Amateur Athletic union, National Collegiate Athletic association and Intercollegiate A.A.A.A. shot-put titles in 1950, continued to improve on the world record, his best throw of 58 ft. 10§ in. being made in Sweden in August.

Dick Attlesey, University of Southern California and Los Angeles Athletic club, bettered Harrison Dillard's world record early in 1950 when he was timed at 13·5 sec. for the 120-yd. event, and later he surpassed Spec Towns's 110-m. record in winning the national A.A.U. outdoor title in 13·6 sec.

At the meeting of A.A.U. officials in December, Don Gehrmann was finally declared winner of the Wanamaker mile of the previous Jan. 28. Gehrmann and Fred Wilt had run an apparent dead-heat. Wilt recorded the fastest 5,000-m. time ever put up by an American when he won in 14 min. 26·8 sec. overseas after capturing the A.A.U. championship.

Mal Whitfield of the U.S. air force proved to be the best half-miler for the third consecutive year and equalled the world record of 1 min. 49·2 sec. held by Sydney Wooderson of Great Britain. (*See* also EMPIRE GAMES.) (T. V. H.)

ATOMIC ENERGY. President Truman's announcement in January that the United States Atomic Energy commission would continue to work upon the development of the so-called hydrogen bomb aroused strong reaction. There was considerable repugnance at the thought of using a weapon variously estimated to be equivalent in explosive power to something between 100 and 1,000 atomic bombs. The principal objection raised was that it was difficult to conceive of situations in which the use of so powerful a bomb would be at all justifiable. It was, however, accepted by many people that, in the present international situation, there was no real alternative to developing the weapon once the possibility of its existence had been revealed. The war in Korea led to suggestions from various quarters that atomic bombs should be used there. The U.S. authorities, however, announced that they had no intention of doing so.

The fourth World Power conference was held in London in July. One session was devoted to nuclear power. Sir John Cockcroft, director of the British Atomic Energy Research establishment, outlined the scientific and technical problems that would have to be solved before any nuclear power plants of any magnitude could be constructed. He estimated that the building of the necessary experimental nuclear reactors would probably take some three to five years. A further five years or so would probably elapse before sufficient experience had been gained with these to enable any large-scale development of nuclear power to be embarked upon. W. F. Davidson and R. Liljeblad both discussed the economic aspects of the question and expressed the view that, at least for several decades, it would not be possible for nuclear power plants to compete in cost with those using normal fuels. This would mean that nuclear power plants would, in the first instance, be of value in situations which made full use of their extremely low fuel consumption. Such applications would be, for example, a large central electrical power station situated in a region remote from supplies of other kinds of fuel in which the cost of transportation of fuel would be abnormally high, or a marine propulsion unit where the increase in cruising radius and the saving in space normally devoted to carrying fuel supplies would be of value.

In December, the atomic energy authorities of Canada, the United Kingdom and the U.S. released certain information upon low-power nuclear reactors, including those nuclear properties of uranium which are important in the design and operation of such reactors. Values were given for the cross sections for fission, capture and scattering of uranium 235 and 238 for low-energy neutrons. It was also stated that on the average 2·5 secondary neutrons are emitted when fission occurs as a result of the absorption of a low-energy neutron by uranium 235.

Constructional details of "Gleep," the low-energy reactor at Harwell, were also described.

British Technical Developments. In 1950 the Ministry of Supply announced the selection of a site at Aldermaston, near Reading, for a seventh atomic energy establishment. Those already in existence were the central research establishment at Harwell, Berkshire, the radiochemical centre at Amersham, Buckinghamshire, the production headquarters at Risley, Derbyshire, the uranium refinery at Springfields, Staffordshire, the plutonium production centre at Sellafield, Cumberland, and a site under development at Capenhurst, Cheshire. The purpose of this last establishment and of that projected at Aldermaston had not been announced by the end of 1950.

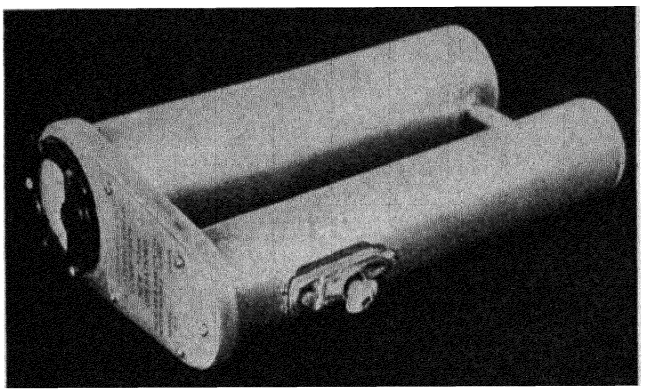
At Harwell, the production of radio-isotopes in "Bepo," the large pile, was expanded and shipments were made at the rate of about 500 a month. Shipments were made to South Africa by loading radio-isotopes into the wingtips of an aircraft. This considerably reduces the weight of shielding required and so reduces the cost of transportation. During the year, much attention was devoted to increasing the industrial uses of radio-isotopes.

Progress was made in the chemical engineering and metallurgical problems associated with the design of more advanced types of nuclear reactors. It was announced that designs were being prepared for experimental reactors which could serve as prototypes for nuclear power plants and in particular for a possible marine propulsion unit.

In April a linear accelerator capable of producing electrons with an energy of 3·5 million electron-volts was brought into operation. It consisted essentially of a hollow metal tube of special design. Pulses of electro-magnetic waves of very short wavelength were sent down the tube simultaneously with a beam of electrons. The electro-magnetic radiation exerted a force on the electrons which were accelerated thereby and attained very high velocities. This type of instrument was developed as a result of the great advances made in high frequency techniques during the development of radar.

During the summer a large electro-magnetic isotope separation plant was completed. It was capable of producing gramme quantities of separated isotopes of the heavy elements. In this apparatus a beam of electrically charged atoms of the element concerned was deflected by a powerful magnetic field. The deflection depended upon the mass of the atom. Consequently, different isotopes were deflected by different amounts and could be collected separately.

Commonwealth. Reports were given during the year on the work that was being done by the Canadian atomic energy project. In addition to a considerable amount of research work in nuclear physics, a new radiochemical laboratory was completed. It was capable of supplying all Canadian demands for radio-isotopes and in 1950 was also exporting to foreign firms and institutions.



A small inexpensive Geiger counter developed in 1950 by the United States Atomic Energy commission.

In Australia, it was announced that mining operations had begun at the extensive uranium deposits which had been found at Radium hill, 270 mi. from Adelaide.

Europe. In France, the construction of a second pile began at Saclay, near Paris. This site was destined to become the central French atomic energy research establishment. The new pile, expected to be completed in 1951, was to consist of uranium metal with heavy water as the moderator. It was to be of a 1,000-kw. capacity, which is comparable with the large Harwell pile, but would have a rather higher neutron flux. Various other instruments for nuclear research were being built at Saclay, in particular a cyclotron and an electrostatic generator. In the course of the year it was announced that a milligramme of pure plutonium had been isolated from material irradiated in the low energy pile, "Zoe," at Fort le Chatillon.

In Norway, work began upon the construction of a low-energy pile which was to be made from uranium oxide and heavy water. It would have a power dissipation of about 100 kw. The site was at Kjeller, 15 mi. from Oslo. It was intended to use the pile for research purposes and for the production of radio-isotopes. (J. L. Ms.)

United States. *The Hydrogen Bomb.* More than 20 years before the discovery of uranium fission in 1939, physicists realized that vast amounts of energy could be released by the synthesis of helium from hydrogen. If four atoms of hydrogen were combined into one atom of helium there would be a loss in mass of 0·0286 atomic mass units. This, in accordance with the Einstein equation for the transformation of matter into energy, $E = mc^2$, would mean the release of 2,670,000 ev. of energy. During the 1930s astronomers came to the conclusion that hydrogen was undoubtedly the atomic fuel of the sun and stars and equations were written by Hans Bethe for the probable nuclear reactions occurring in the celestial bodies. But scientists despaired of duplicating these processes on earth since apparently they could take place only at the high temperatures existing in the interiors of the sun and stars. Because of their dependence on such temperatures they were named thermo-nuclear reactions. However, with the discovery of uranium fission a new possibility developed. Even before an atomic bomb had been achieved, J. Robert Oppenheimer and his associates at the United States national scientific laboratory at Los Alamos, New Mexico, recognized that the explosion of a uranium bomb would generate a temperature at which thermo-nuclear reactions might take place. It occurred to them that it might be possible to build a hydrogen bomb which would employ an atomic bomb as the detonating fuse.

After World War II, preliminary studies were instituted at Los Alamos to explore these possibilities. It was realized that it was not feasible to employ ordinary hydrogen, which is a mixture of 98% lightweight hydrogen and 2% deuterium or double-weight hydrogen. It did appear, however, that a hydrogen bomb could be made with deuterium; or with tritium or triple-weight hydrogen; or with a combination of deuterium and tritium. Deuterium could be separated from ordinary hydrogen by chemical means. However, tritium occurs in nature only in infinitesimal amounts. But it was known that tritium could be produced by subjecting lithium to neutron bombardment in a nuclear reactor or uranium pile. It was estimated that a given weight of tritium would release seven times as much atomic energy as an equal weight of plutonium. One kilogram of tritium would be the equivalent in explosive violence to 140,000 tons of T.N.T.—the atomic bomb that devastated Hiroshima was the equivalent of 20,000 tons of T.N.T.

Unlike the uranium or plutonium bomb, the hydrogen bomb would not be limited in size to any critical mass. Theoretically it appeared possible to produce a hydrogen bomb 1,000 times as powerful as an atomic bomb. Cost of production and difficulties of transportation appeared to be the only limiting factors. A further possibility was the construction of a hydrogen bomb surrounded by some material that would be rendered highly radioactive by the neutrons released in the bomb explosion. The substance most suitable for this purpose appeared to be cobalt, so that the proposed weapon was designated a hydrogen-cobalt bomb. It was suggested that such a bomb exploded at sea would release great quantities of radioactive dust which would be carried landward by prevailing winds to devastate vast areas.

On Nov. 28, 1950, the U.S. Atomic Energy commission announced that a new plant, to be known as the Savannah River plant, would be built on a 250,000 ac. site in Aiken and Barnwell counties, South Carolina, on the Savannah river. It was generally understood that the primary purpose of this plant would be the production of material for the hydrogen bomb. Congress appropriated $260 million for construction of the new plant.

Research. The largest and most powerful nuclear reactor designed exclusively for research purposes went into operation at the Brookhaven National laboratory on Aug. 22, 1950. It was an air-cooled graphite-uranium pile which cost $25 million to build. Columbia university, New York city, became the possessor of the world's most powerful atom smasher when its new synchro-cyclotron began operation on May 2 at Irvington-on-Hudson. It developed energies of 400 million ev.

Propulsion Units. The Westinghouse Electric corporation and the General Electric company were engaged in 1950, under contracts with the U.S. Atomic Energy commission, on the design of atomic power plants for use in submarines. Westinghouse was working on a ship thermal reactor, a nuclear reactor utilizing slow neutrons, while General Electric was working on a ship intermediate reactor employing neutrons of higher speed. Early in 1950 a technical advisory board to the Oak Ridge National laboratory, composed of more than 20 aeronautic and nuclear physicists, was organized to accelerate the development of a nuclear power plant for aeroplanes.

Radiological Warfare. It had been realized since 1945 that the fission products formed in a nuclear reactor could be used to manufacture particularly vicious forms of radio-active poison gases or for the preparation of radio-active dusts and

sands. These could be released in various ways or fired in artillery shells. The U.S. Atomic Energy commission announced in 1950 that it was continuing its studies of radiological warfare.

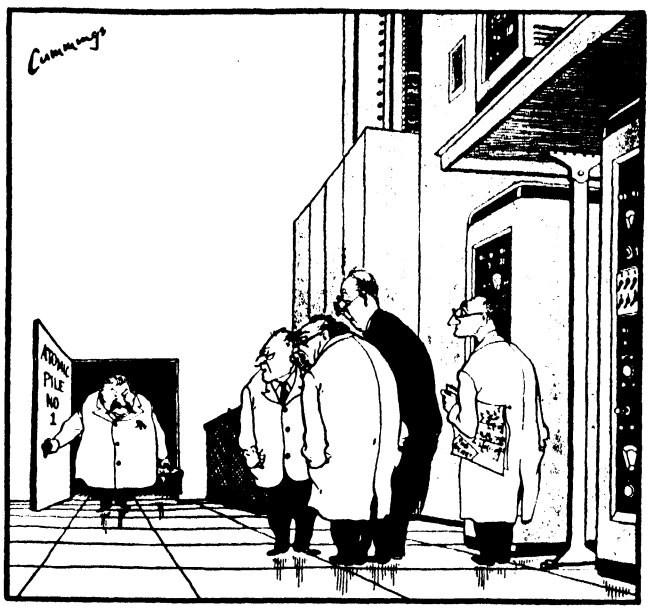
United States Atomic Strength. The entire programme of the U.S. Atomic Energy commission was accelerated in 1950. Fissionable materials were produced at the highest rate of output and the lowest unit cost on record. Procurement of both foreign and domestic ores was increased and plans were made to expand operations on the Colorado plateau. Planning and construction were carried on for new weapons tests at the Eniwetok proving grounds in the Pacific. The U.S. air force disclosed that hundreds of men had been taught in a secret training programme how to handle atomic bombs. The U.S. navy announced that bomber planes sufficiently large to carry atomic bombs had made successful test landings on an aircraft carrier. Gen. J. Lawton Collins, chief of staff of the U.S. army, said that an artillery piece capable of firing atomic weapons and guided missiles with atomic war-heads were under development. As 1950 drew to a close, the U.S. made plans for a tremendous expansion of its atomic energy facilities in 1951. On Dec. 13, Senator Brien McMahon outlined to the senate a $1,050 million programme for the development of new and more effective atomic weapons. This included a $500 million plant to be built near Paducah, Kentucky, for the production of uranium 235.

Civil Defence. The basic information required for the planning of civil defence against atomic attack was published on Aug. 12, 1950, by the U.S. Department of Defence in *The Effects of Atomic Weapons.* This described in detail the four main sources of damage in an atomic explosion, namely, (1) the air blast or shock wave, (2) the heat wave or thermal radiation, (3) the radioactive rays or nuclear radiations and (4) the residual radioactivity of the fission fragments. The chief damage is done by the air blast or shock wave and this is greatest when the bomb is exploded in air at an altitude of about 2,000 ft. Under such circumstances the average limit of general structural damage is roughly two miles in all directions from ground zero, the point directly under the exploding bomb.

On Sept. 8 the National Security Resources board submitted a plan to President Truman for the civil defence of the U.S. On Dec. 1 President Truman created the federal Civil Defence administration as a branch of his executive office and appointed former Governor Millard F. Caldwell, Jr., of Florida, to head it. On Dec. 4 bills were introduced into congress embodying the plan for civil defence prepared by the National Security Resources board. This called for the expenditure of $3,100 million over a period of three years. The largest expenditure foreseen was that of $2,250 million for communal air-raid shelters.

U.S. Atomic Energy Commission. On July 11 President Truman nominated Gordon Dean, a member of the commission, to be chairman in place of David Lilienthal, whose resignation had become effective on Feb. 15. Marion W. Boyer, vice president of the Esso Standard Oil company, became general manager on Oct. 25 in place of Carroll Wilson, who had resigned.

International Deliberations. Attempts to reach an international agreement on the control of atomic energy came to an abrupt halt on Jan. 15, 1950, when the Soviet deputy foreign minister, Yakov Malik, walked out of a conference of representatives of the five permanent members of the Security council and Canada at Lake Success. When President Truman addressed the general assembly of the United Nations at Lake Success on Oct. 24, he suggested that a new approach might be made to disarmament and the control of atomic energy by merging the U.N. Atomic Energy commission and the Commission for Conventional Armaments. When, however, on Nov. 3 the political committee approved a resolution calling on all nations to accept the majority plan for the control of atomic energy and to agree to a reduction in armaments, the vote was 47 to 5, with the Soviet bloc casting the negative votes.



A cartoon by Cummings in the "Daily Express" (London) in March 1950—"Ah! Dr. Fuchs's successor, no doubt."

Security Cases. On April 28, Frédéric Joliot-Curie was dismissed from his post as French high commissioner for atomic energy after he had addressed the congress of the French Communist party saying that a "true progressive scientist" would never give any of his knowledge for war against Russia. Professor Bruno Pontecorvo, a naturalized British subject, failed to return to his post at the British atomic energy station at Harwell when his leave expired on Aug. 31. He had been on holiday in Italy and it was later learned that he arrived at Helsinki, Finland, on Oct. 23. George Strauss, minister of supply, told the House of Commons on Nov. 6 that he believed Pontecorvo had gone to Russia.

On March 1 Klaus Fuchs was sentenced at the central criminal court, London, to 14 years' imprisonment for giving U.S. and British atomic secrets to the U.S.S.R. Fuchs had joined the German Communist party in 1932 and fled to Britain in 1933. He was naturalized in Britain after he had worked on atomic energy projects in World War II. It was believed probable that his treachery enabled the U.S.S.R. to achieve the atomic bomb at least a year earlier that it could otherwise have done. On Dec. 9 Harry Gold, 39, a biochemist, of Philadelphia, Pennsylvania, was sentenced in the U.S. to 30 years' imprisonment for acting as a messenger between Fuchs and Soviet espionage agents. (*See* also CHEMISTRY; METALLURGY; MINERAL AND METAL PRODUCTION; PHYSICS; X-RAY AND RADIOLOGY.) (D. Dz.)

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ATTLEE, CLEMENT RICHARD, British statesman (b. London, Jan. 3, 1883), was educated at Haileybury and University college, Oxford. After a period of legal practice, he was secretary of Toynbee hall, London, and a lecturer at Ruskin college, Oxford. In 1913 he joined the staff of the London School of Economics. During World War I he served in Gallipoli, Mesopotamia and France. He was first Labour mayor of Stepney, London, 1919-20, was elected M.P. for Limehouse in 1922, and in the second Labour government was chancellor of the duchy of Lancaster and later postmaster general. He was deputy prime minister in the wartime coalition government and became prime minister when the Labour party achieved a majority in July 1945.

In the general election of Feb. 23, 1950, the Labour party was confirmed in power with a small majority, and the prime minister was returned for West Walthamstow; and on Feb. 25 he accordingly re-formed his ministry. On March 16 he rejected Winston Churchill's demand for a secret session on defence. In April he attended the opening by Mrs. Attlee of the Thames water 'bus service and spoke at the Royal Academy dinner. He had discussions with the U.N. secretary general, Trygve Lie, in April and May; in May he also conferred with the U.S. secretary of state, Dean Acheson, and attended a dinner in the latter's honour given by the Pilgrims of London. On May 28 he left for a short tour of the Loire chateaux with Mrs. Attlee; they were later entertained by Joseph Paul-Boncour, former French premier. The prime minister broadcast once before the general election and three times on defence. On July 31 he opened a new ocean terminal at Southampton. In September he attended the 82nd annual Trades Union congress at Brighton and, speaking at the Labour party conference at Margate in October, rejected suggestions that there would be a coalition government or an immediate general election. On Oct. 26 he took part in the ceremony to mark the opening of the new House of Commons chamber. On Dec. 2 he received the French prime minister and foreign minister, and two days later flew to Washington for discussions on defence with President Truman. After calling at Ottawa on Dec. 10 for consultations with the Canadian prime minister, he returned to London on Dec. 12.

AURIOL, VINCENT, French statesman (b. Revel, Haute-Garonne, Aug. 27, 1884). After receiving his degree of doctor of laws at the faculty of law in Toulouse, he practised in that city. In the early 1900s Auriol edited the newspaper *Le Midi socialiste*. Entering politics, he was constantly elected to the Chamber of Deputies as Socialist member for Muret (Haute-Garonne) from 1914 to the collapse of France in June 1940. Auriol's first cabinet post was in the Blum cabinet in 1936, when he was appointed minister of finance. He was minister of justice in the Chautemps cabinet (1937-38) and held a post in the short-lived Blum cabinet in 1938. Auriol, who was among 80 French parliamentarians who on July 10, 1940, voted against according full powers to Marshal Pétain, was imprisoned by Vichy authorities for several months but was later released. In Oct. 1943 he escaped to London where he joined General de Gaulle's movement. He became a member of the Consultative Assembly set up in Paris after its liberation in Aug. 1944. In Nov. 1945 he was appointed minister of state without portfolio in the de Gaulle government. He was elected president of the French Constituent Assembly on Jan. 31, 1946, and was twice re-elected to the post during 1946. On Jan. 16, 1947, Auriol became the first president under the constitution of the Fourth Republic; he was elected by 452 votes out of 883 cast by the combined houses of National Assembly and Council of the Republic, meeting at Versailles. In April 1947 he paid an official visit to French West Africa. In May 1949 he visited Algeria. On March 7, 1950, President and Mme. Auriol arrived in London on a three-day state visit. At a state banquet at Buckingham palace at which King George referred to the old ties uniting France and Great Britain, President Auriol said in reply that the happiness and peace of the peoples of the world largely depended on the resolution of the two nations to act in concert. During May 23-26 Queen Juliana and the Prince of the Netherlands were the guests of President and Mme. Auriol in Paris during an official visit to France.

AUSTIN, WARREN ROBINSON, United States lawyer and politician (b. Highgate, Vermont, Nov. 12, 1877), graduated from the University of Vermont in 1899, practised law and became active in Republican politics. Elected U.S. senator from Vermont in 1931 to fill an unexpired term, he was re-elected in 1934 and 1940 but resigned to become acting U.S. representative to the United Nations on June 5, 1946. He was confirmed in this appointment with the rank of ambassador on Jan. 13, 1947. He was one of several U.S. leaders to disagree with Herbert Hoover's suggestion, early in 1950, that the United Nations should proceed without the Communist *bloc*, which was then boycotting the Security council. He led the attack against Soviet efforts to use the Security council as a propaganda sounding-board after the Russians resumed their seat to take advantage of their turn in the presidency in Aug. 1950. He repeatedly opposed the Soviet delegate, Yakov Malik (*q.v.*), in debates on Korea. On Aug. 2 he led the fight against Malik's attempt to seat the delegation of the Peking regime on a ruling from the chair. He consistently held that the U.N. rulings of 1947-49 that Korea must be unified by popular vote must be adhered to.

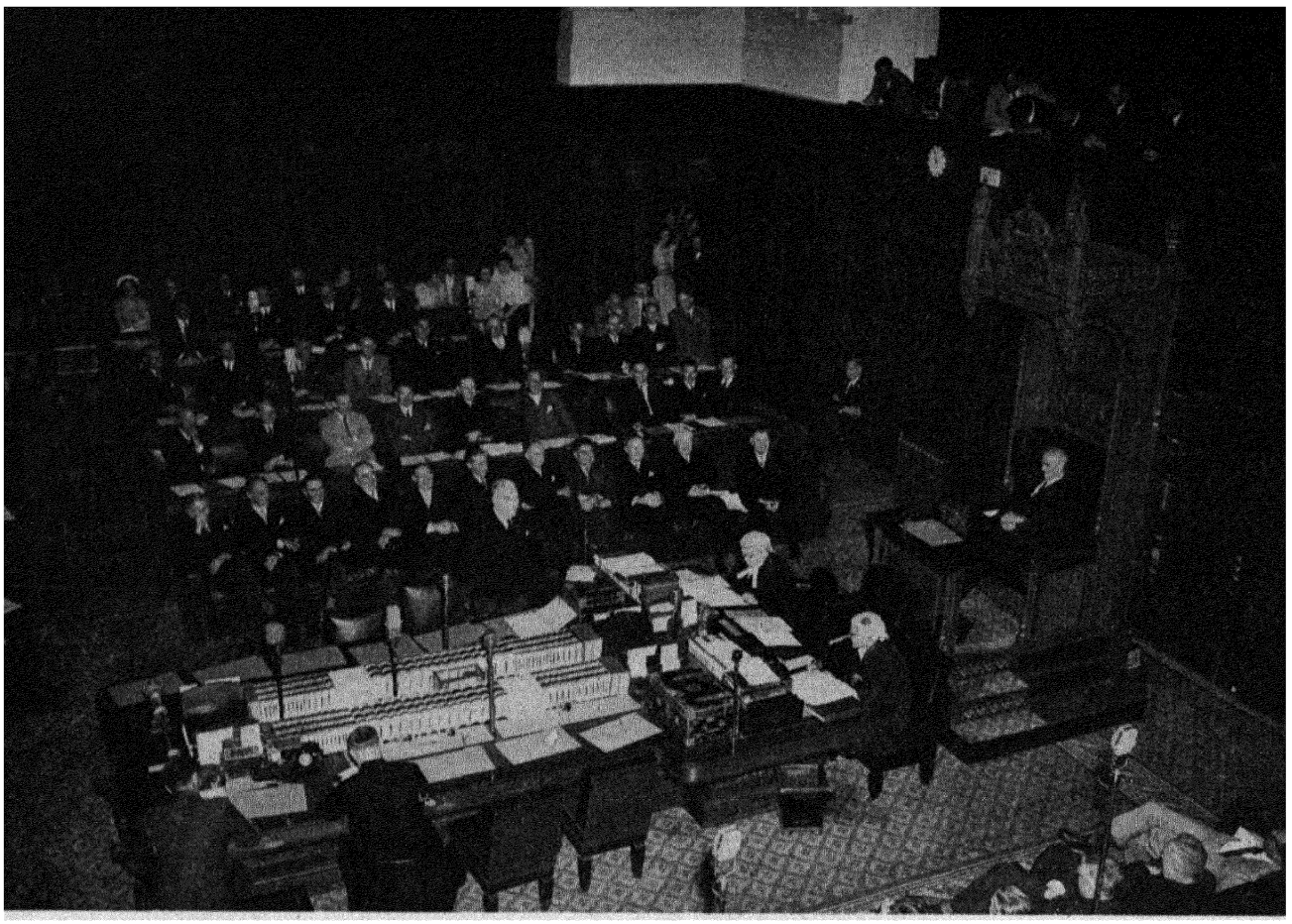
AUSTRALIA, COMMONWEALTH OF. Self-governing member of the Commonwealth of Nations, situated in the southern hemisphere. Areas and populations of the six federated states, of the Northern territory and of the Australian Capital territory are:

States and Territories with their capitals	Area (sq. mi.)	Population (1947 census)	Population (mid-1950 est.)
New South Wales (Sydney)	309,433	2,985,464	3,225,242
Victoria (Melbourne)	87,884	2,055,252	2,202,869
Queensland (Brisbane)	670,500	1,106,269	1,183,792
South Australia (Adelaide)	380,070	646,216	700,257
Western Australia (Perth)	975,920	502,731	557,918
Tasmania (Hobart)	26,215	257,117	272,649*
Northern Territory	523,620	10,866	15,303
Australian Capital Territory (Canberra)	939	16,905	20,772
	2,974,581	7,580,820	8,178,802

* Dec. 31, 1949, est.

Full-blood aboriginals were estimated at 47,000; half-castes numbered 24,881 in 1944. Territories under the administration of the Commonwealth but not included in it comprise Papua (*q.v.*), Norfolk Island, the trust territory of New Guinea, Nauru, the territory of Ashmore and Cartier islands, and the Australian Antarctic territory. Language: English. Religion: Christian (1933 census: Anglican 2,565,118; Roman Catholic 1,161,455; Presbyterian 713,229; Methodist 684,022; other Christian 603,914); Jewish 37,000. Chief towns (pop., 1947): Sydney (1,484,434); Melbourne (1,226,923); Brisbane (402,172); Adelaide (382,604); Perth (272,586); Newcastle (127,188); Hobart (76,567). Governor general, William John McKell; prime minister, Robert Gordon Menzies (*q.v.*).

History. The new government, a coalition of the Liberal and Country parties, with R. G. Menzies (Liberal) as prime



R. G. Menzies (standing, centre), prime minister of Australia, congratulating A. G. Cameron (right) on his election as the new speaker of the Federal House of Commons, Feb. 1950. The government supporters can be seen behind the prime minister.

minister, and A. W. Fadden (Country party), in charge of the Commonwealth Treasury, had taken office just before the year began. Australian public affairs in 1950 were dominated internally by the new government's bill for the suppression of the Communist party and externally by the growing international tension, culminating in the Korean war.

The Suppression of the Communist Party. In bringing in a bill for the suppression of the Communist party and affiliated organizations, the government fulfilled an election pledge. The main features of the bill were: the declaration as illegal of the Communist party and certain organizations declared to be affiliated to Communism; the declaration by the governor general in council of certain individuals as Communists. Declared individuals would become automatically disabled from holding executive office in certain named key trade unions. The bill defined Communists as persons " who support or advocate the objectives, policies, teachings, principles, or practices of Communism as expounded by Marx and Lenin." The bill provided for a right of appeal to the High Court by declared persons or associations. It was expressly based, in the first place, on the defence power of the Commonwealth, and in the second place, on the power of the Commonwealth to make laws incidental to the execution and maintenance of the constitution and the laws of the Commonwealth. The bill aroused strong public controversy, and the opposition of the Labour party. As a result, the government introduced certain amendments, in particular a high-level advisory committee, to advise the government on the declaration of persons and associations. It did not yield on the vital " onus of proof " clause, which charged the " declared " person to deny on oath that he was a Communist. After months of discussion, the Labour party, faced with the threat of a double dissolution, of the House of Representatives and the Senate, withdrew its opposition to the bill. Upon the promulgation of the Suppression of the Communist Party act, the party became automatically illegal, but the implementation of the act was delayed by the party's challenge of the constitutionality of the act before the High Court—an action pending at the end of the year.

During the year, the royal commissioner appointed by the Victorian government to enquire into the activities of the Communist party (Mr. Justice Lowe) issued his report, which came to the conclusion that the party did not openly advocate unconstitutional procedure, but that its objective and policies encouraged the fomenting of industrial disputes and internal unrest, and in certain contingencies envisaged resort to unconstitutional means for the overthrow of government.

Industrial and Economic Position. By comparison with the previous year, the country was free from serious industrial trouble, except for a railway strike affecting most of the Australian states, which started early in October over the refusal of a conciliation commissioner to sanction an agreement between the Victorian railway commissioners and the Railwaymen's union, by which passive time was to be counted in the assessment of overtime rates.

In June 1950 the basic wage stood at £6 15*s.* 0*d.* Returns compiled from 80% of wage-earners showed at the same time an average wage of £9 19*s.* 0*d.* The Commonwealth Arbitration Court issued its basic-wage judgment, which increased the basic wage by £1 a week.

Economic activity was sustained on a high level; national income in 1949-50 was £A 2,265 million, an increase of

16% over 1948-49; the level of employment in June 1950 was the highest on record, with 2,546,900 wage and salary earners. Unemployment in March was 0·8%, equal to the lowest recorded. Prices rose sharply during the year; the "C" series retail index in June indicated an increase of 10% over June 1949.

Exports rose to £A 617·3 million, an increase on the previous year of 14%. This was due mainly to the further price rises in wheat, and in particular, in wool, which was in keen competitive demand by Soviet, U.S. and other buyers. Imports stood at £A 536 million for the same period, an increase of 30% over 1948-49.

The Commonwealth obtained a dollar loan from the International Bank for Reconstruction and Development, earmarked for the purchase of U.S. machinery and other capital equipment. Australia's overseas funds rose to £650 million, an increase on the previous year of 43%. The estimated capital inflow of £A 210 million was believed to be largely due to "hot money" transferred to Australia in anticipation of the revaluation of the Australian currency. Revaluation, however, was officially shelved by the government, after repeated discussions.

Defence Services. Estimated defence expenditure for 1950-51 was £A 133,383,000, an increase of £A 79,136,853 over the previous year. This was almost entirely due to a vastly increased defence programme, connected with Australia's active participation in the United Nations' action in Korea, and a projected expansion of all three arms of the military forces.

Immigration. The number of immigrants was expected to exceed 200,000 in 1950, as compared with 149,000 in 1949. It was anticipated that, with the gradual exhaustion of the European pool of displaced persons, the proportion of British immigrants would increase. The absorption of immigrants into production and employment caused no problems, but the housing shortage became more acute. The gap between housing needs and new building was, at the prevailing rate of construction, expected to increase by 30,000 to 35,000 houses a year.

Foreign Affairs. Australia was one of the first members of the United Nations to promise support for action in Korea and immediately sent a fighter squadron stationed in Japan, which fought with the U.S. forces. In September a battalion of the Australian occupation forces in Japan became part of the British Commonwealth brigade fighting in Korea. Under its new minister for external affairs, P. C. Spender (*q.v.*), Australia's foreign policy took a sharper anti-Soviet turn. In the U.N. general assembly, Australia strongly supported intervention in Korea, opposed Soviet proposals for the banning of atomic weapons alone, opposed the recognition of the Communist Chinese government and generally supported the policy of the United States. Spender also proposed a Pacific pact which would link together all the American states with a Pacific coastline, Australia, New Zealand, the Philippines, Korea and anti-Communist China, as well as the British Pacific possessions.

The Arts and Sciences. Professor M. L. E. Oliphant, noted nuclear physicist, became director of the National University School for Nuclear Research at Canberra. Visiting lecturers from overseas included Bertrand Russell (*q.v.*), Professor A. R. Todd of Cambridge, Sir Alan Herbert; the vice chancellors of most of the Commonwealth universities visited Australia on their way to a conference in New Zealand. The archbishop of Canterbury arrived in October for an extensive visit to the country. Visiting artists from overseas included the conductors Otto Klemperer and Sir John Barbirolli, and the Australian-born composer, Arthur Benjamin, the Robert Masters quartet, the singer Erna Berger and the actress Elizabeth Bergner. (W. FR.)

Education. (1947) State schools 8,212, pupils (average weekly enrolment) 856,753, teachers 32,941; private schools 1,871, pupils (average weekly enrolment) 281,838, teachers 12,484; universities 8, students 30,477, professors and lecturers 2,141.

Agriculture. Main crops ('000 metric tons, 1948-49; 1949-50 in brackets): wheat 5,190 (5,891); oats 428 (580); maize 132 (178); barley 403 (414); sugar cane, raw value, 964 (955); potatoes 457 (520). Livestock ('000 head, March 1949): sheep 108,500; cattle 14,124; pigs 1,194; horses 1,116. Wool production ('000 metric tons, greasy basis, 1948-49; 1949-50 in brackets) 465 (474). Milk production (million gal., 1948-49; 1949-50 in brackets) 1,206 (1,250). Food production ('000 metric tons, 1948-49; 1949-50 in brackets): butter 164·4 (171·2); cheese 43·9 (45·6); meat 986·4 (1,048·7) of which beef 582·0 (611·8).

Industry. Manufacturing establishments (1948-49): 40,010; persons employed, including working proprietors, 890,454. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 14,328 (7,962); lignite ('000 metric tons) 7,488 (3,871); manufactured gas (million cubic metres) 974 (516); electricity (million kwh.) 9,018 (4,925). Raw materials (1949; 1950, six months, in brackets): gold ('000 fine ounces) 893 (417); refined copper ('000 metric tons) 10·1 (7·9); refined lead ('000 metric tons) 187 (108); zinc ('000 metric tons) 83 (43); steel ingots and castings ('000 metric tons) 1,149 (689). Manufactured goods ('000 metric tons): wool yarn (1948-49; 1949-50 in brackets) 23·0 (21·7); cement 1,076 (643).

Foreign Trade. (£A million, 1949; 1950, six months, in brackets) import 455 (296); export 535 (358). Main sources of imports (1948-49): U.K. 51·4%; U.S. 10·2%; India 6·4%; Canada 2·9%. Main destinations of exports: U.K. 42·4%; France 8·5%; U.S. 5·9%; Italy 5·3%. Main imports: machinery 9·8%; cotton and linen piece-goods 7·5%; petroleum 5·1%; silk and rayon piece-goods 4·1%. Main exports: wool 42·3%; wheat and flour 18·6%; meat 5·4%; butter 4·4%.

Transport and Communications. Roads (1946 est.): 500,497 mi. Licensed motor vehicles (Dec. 1949): cars 747,200; commercial 425,889. Government railways (1948-49): 26,999 mi.; passengers carried 504,076; freight carried 40,225 tons; freight net ton-mi. 6,308 million. Shipping (merchant vessels of 100 gross tons and over, July 1949): 341, total tonnage 541,516. Air transport (1949): mi. flown 43,224,000; passenger-mi. 710·9 million; freight net ton-mi. 18·0 million; air mail ton-mi. 4·1 million. Telephones (Dec. 1949): subscribers 1,066,385. Wireless licences (Dec. 1949): 1,986,180.

Finance and Banking. (£A million) budget: (1949-50) revenue 589·5, expenditure 606; (1950-51 est.) revenue 738·7, expenditure 738·3. National debt (June 1949; June 1950 in brackets): 1,838·2 (1,850·9) Currency circulation (Aug. 1949; Aug. 1950 in brackets): 218 (237). Gold and foreign exchange (million U.S. dollars, March 1949; March 1950 in brackets): 1,301 (1,251). Bank deposits (Aug. 1949; Aug. 1950 in brackets): 678 (855). Monetary unit: Australian *pound* with an exchange rate of £A 1·25 to the pound and £A 0·45 to the U.S. dollar.

See J. B. Greaves, *Economic and Commercial Conditions in Australia* (London, H.M.S.O., 1950).

AUSTRALIAN LITERATURE. Australian literary output maintained its variety in 1950 only in the face of rising costs of printing and publication. Poetry suffered moreover a continued decline from the public support which it had enjoyed during the war, and *Australian Poetry* had to announce that future volumes would appear only every second year. The year however saw the publication of Australia's most ambitious poem, *The Great South Land* by Rex Ingamells, the 12th volume of his poetical works, which dealt with the discovery of Australia and reached the proportions of *Paradise Lost*. Two poetry collections were issued: James Devaney's *Poems* made up from five small books no longer in print; and Nancy Cato's *The Darkened Window*, a collection of poems which had previously appeared in the *Bulletin*. Under the auspices of a Commonwealth literary fund, Donovan Clarke began work on a *Panorama of Australian Poetry*, dealing with the lives and works of Australian poets, living and dead.

Perhaps the outstanding work of criticism was Nettie Palmer's *Henry Handel Richardson*, a study based on an intimate friendship with the author and a profound knowledge of her work. Colin Roderick provided an interesting and valuable survey of literary developments in *An Introduction to Australian Fiction;* and the regular work of *Southerly*, *Meanjin* and the "Red Page" of the *Bulletin* made their usual contribution to Australian criticism, the Chris Brennan number of *Southerly* being of particular note.

Among the novels were Norman Lindsay's *Dust or Polish* written with his usual gusto and vitality; Jean Devanny's *Cindie*, a story of the Queensland cane-fields; *Winged Seeds*, the third volume of Katherine Susannah Prichard's trilogy on the Western Australian goldfields; Gavan Casey's *City of Men*, a documentary novel of a Kalgoorlie family; John Morrison's *The Creeping City;* and Catherine Gaskin's *Dust in the Sunlight*, her first novel set in a London scene.

Short stories and plays published in book form were fewer than ever. *Coast to Coast* and George Farwell's *Surf Music and Other Stories* and Dymphna Cusack's *Three Australian Three-Act Plays* were the most notable in these fields. (C. A. BR.)

AUSTRIA. Republic of central Europe. Area: 32,388 sq.mi. Pop.: (1939 census) 6,652,720; (1948 census) 6,952,744. Language: German 98%, other 2% (mainly Slovene in Carinthia). Religion (1939): Roman Catholic 88·27%, Protestant 5·35%, Jewish 1·26% (0·2% in 1945), other 5·12%. Principal towns (pop., 1948 est.): Vienna (cap., 1,730,613); Graz (226,229); Linz (184,336); Salzburg (106,919); Innsbruck (98,561); Klagenfurt (65,950). President, Dr. Karl Renner (died Dec. 31; *see* OBITUARIES); chancellor, Leopold Figl. The Austrian government had jurisdiction throughout Austria, with certain limitations regarding matters control over which was reserved to quadripartite decision in the Allied Council for Austria. By Dec. 31, 1950, members of the A.C.A. were: France, Jean Payart (from June 29); United Kingdom, Sir Harold Caccia (from June 12); U.S., Walter S. Donnelly (from Aug. 24); U.S.S.R., Lieut. General V. P. Sviridov.

History. The country remained divided into four occupied zones, and Vienna into as many sectors, plus the quadripartite regime of the *innere Stadt*. The total strength of the occupying forces at the beginning of 1950 was 68,500, of which Soviet troops numbered 44,000, U.S. 10,000, British 8,500 and French 6,000. In the five years of occupation the military and civilian costs had swallowed up, it was estimated, some 30% of the country's wealth: in 1949 alone contributions amounted to Sch. 420 million.

In addition, the Russians by enforcing their claim on all ex-German properties secured possession of most of Austria's oil as well as the assets of the Danube Shipping company; and in their latest negotiations over the terms of the will-o'-the-wisp peace treaty, they sought to exact payment in respect of the relief goods and services which they supplied immediately after World War II. The Soviet Union thus had a tight grip on the nation's economy, even if its conduct had ensured that the majority of Austrians would be in the western camp.

No wonder, then, that the dearest wish of both government and people was to achieve a peace treaty and effective independence: to get rid of "the men on their back." The prevalent feeling of "disappointment, grief and righteous wrath" found fitting expression in President Renner's New Year broadcast, and he re-quoted his famous simile of "four elephants in a rowing boat."

Only the U.S. could afford to pay their own occupation costs, but the process of relaxation of controls continued throughout 1950. Such measures of alleviation, however, could bring little comfort, but were in contrast with the behaviour of the Soviet Union, seemingly concerned to frustrate the efforts of the foreign ministers' deputies to get an agreed draft treaty. The minister of finance, Eugen Margaretha, showed elementary realism in including the occuation-costs tax in his 1950 budget estimates. And the public mood was on the whole fatalistic.

Nevertheless, the government felt it incumbent on them to make the demand that these costs should be borne by the occupying powers. A note in this sense was addressed to the powers and on March 8 Karl Gruber, foreign minister, detailed in parliament some of the other requests that were included: that the strength of the foreign garrisons should be drastically reduced; that requisitioned property should be released; and that all military courts, zonal frontier controls and every form of censorship should be abolished. Chancellor Figl was understood also to have suggested a meeting in Vienna at the highest level to break the deadlock.

This proposal was not taken up. But, after the 252nd abortive meeting of the deputies on April 26, the foreign ministers of the three western powers, on the occasion of their London talks, issued on May 19 a statement that they were willing to settle all outstanding issues if this would bring about agreement on the treaty as a whole; failing that, while the occupation must be maintained, everything possible would be done to lighten the burden, and, to begin with, civilian high commissioners would be appointed to replace the military commanders.

A formal reply was made by the British Foreign Office on July 13. The concessions comprised: a considerable reduction of high commission personnel, further de-requisitioning, a promise of sympathetic consideration for any plan for ending Allied control over the Austrian broadcasting system and, in time, the abolition of military travel permits. But on military courts and the right to ban books and newspapers the British government would not yield. (In fact censorship no longer existed in the British zone.) The U.S. and French governments made somewhat similar response.

During 1950 Austria received Sch. 2,600 million in respect of Marshall aid funds, divided almost equally among private undertakings, nationalized industries and public services, including the railways. In addition a "stopgap" allocation of a further Sch. 200 million from E.R.P. sources was forthcoming to cover housing costs, for which, as in 1949, no provision had been made in the budget. This helped substantially to relieve an acute situation in the building trade, which threatened to have serious political consequences. The subsidies to industry and agriculture thus made possible went some way to correcting the unfavourable trade balance of 1949. But, even so, the chronic problem of unemployment (which had reached a peak figure of 195,000 in February) persisted, and the ominous date of 1952, when Marshall aid would cease, was looming ahead.

Thanks to U.S. aid industrial production rose to 109% of the 1937 figure; agricultural output and the volume of exports, on the other hand, amounted to only 70% of the prewar level. The hardest task of the Catholic-Socialist coalition government was, clearly, to strike a fair balance between the interests of town and country. Early in September a crisis developed over fixing the inland price of wheat: the People's party were stipulating for a figure higher than the Socialists could accept unless there were a compensatory rise in wages. After some hard bargaining, under the shadow of a threatened strike by the trade unions, a new price and wage agreement was reached, on a basis of a 10% increase of wages and salaries, with appropriate increases in pensions and family allowances, to offset the increased cost of living, including the removal of certain food and fuel subsidies. The Communists, however, saw an opportunity to stir up unrest. First they initiated token strikes and demonstrations, with the deliberate connivance of the Soviet authorities in Vienna; and then on Sept. 30 a conference of some hundreds of Communist works councillors issued an ultimatum calling for a general strike on Oct. 3 unless the wage and price agreement were withdrawn. By that time, however, the government and trade union leaders regained complete authority over the bulk of the workers, and the strike was called off. Only in the Soviet zone were there any serious disturbances.

For the time being the Communists ceased to count as a

serious factor in Austria's internal politics. At the Peasant Chamber elections held in Lower Austria in April, despite Soviet activity, they failed to win a single seat. And in local elections in the same Soviet sector of Lower Austria held in May they polled only 5·23%—against 51·96% for the People's party and 39·97% for the Social Democrats: 10 of the 11 Communist mayors installed in 1945 lost their seats.

Neo-Nazism, likewise, receded as a political danger, with the disintegration of the League of Independents. Its moderate leader, Herbert Kraus, continued to woo the *Volkspartei* leaders with the prospect of an anti-Marxist combination in parliament which would have a comfortable majority. But in fact the rift between Socialists and Communists was widening, and the great majority of Austrians perceived that the maintenance of the " black-red " coalition was essential for the very survival of their country. (W. H. CTR.)

Education. Schools (1948-49): elementary 4,956, pupils 829,326, teachers 34,105; secondary 167, pupils 47,310, teachers 3,476; technical and commercial 64, students 20,739, teachers 1,691. Teachers' training colleges 28, students 4,821, lecturers 534; universities 4, students 19,762, professors and lecturers 1,684.

Agriculture. Main crops ('000 metric tons, 1949; 1950 est. in brackets): wheat 350 (347); barley 197; oats 286; rye 365 (366); maize 132; potatoes 2,008; sugar 52 (67). Livestock ('000 head): cattle (Dec. 1949) 2,200; sheep (Dec. 1948) 454; pigs (May 1950) 2,024; horses (Dec. 1948) 286; poultry (May 1950) 4,140.

Industry. Insured persons employed (Dec. 1949) 1,896,966. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 184 (89); lignite ('000 metric tons) 3,816 (2,045); electricity (million kwh.) 4,164 (2,253); crude oil 900 (450). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): iron ore 1,728 (831); pig iron 838 (420); crude steel 835 (464); magnesite 521 (255); lead smelter 8·6 (4·6). Manufactured goods ('000 metric tons, 1949; 1950, six months, in brackets): woven cotton fabric 12·0 (6·3); cotton yarn 18·0 (9·4); fertilizers 288 (93); chemical and paper pulp 430 (235); cement 1,098 (582).

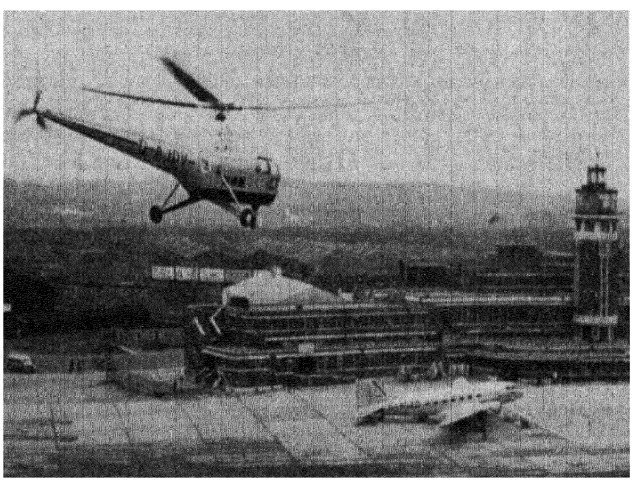
Foreign Trade. (Million schillings, 1949; 1950, six months, in brackets.) import 4,477·2 (3,551·9); export 3,228·0 (2,719·1). Main sources of imports (1949): Germany 16%; Italy 12%; Czechoslovakia 9%; U.S. 6%. Main destinations of exports: Italy 18%; Germany 8%; Czechoslovakia 7%; Yugoslavia 7%.

Transport and Communications. Roads (1947): 53,000 mi. Licensed motor vehicles (Dec. 1949): cars 37,350; commercial 54,620. Railways (Jan. 1949): 3,728 mi.; passenger-mi. (1948) 2,617 million; freight net ton-mi. (1949) 3,311 million. Telephones (1949): subscribers 231,857. Wireless licences (1949): 967,787.

Finance and Banking. (Million schillings) budget: (1949) revenue 6,091, expenditure 7,532; (1950 est.) revenue 9,617, expenditure 10,695. Internal debt (Dec. 1948; Dec. 1949 in brackets): 11,152 (11,826) Currency circulation (Sept. 1949; Sept. 1950 in brackets): 5,817 (5,863). Bank deposits (Aug. 1949; Aug. 1950 in brackets): 5,367 (6,864). Monetary unit: *Schilling* with an exchange rate (Nov. 1950) of Sch. 60·20 to the pound and Sch. 21·49 to the U.S. dollar.

AVIATION, CIVIL. In 1950 British commercial air transport began to use new aircraft which had been delayed in delivery, and so entered the phase in which more satisfactory financial results could be expected; yet in the course of the year there were unexpected setbacks. Some of the effects of the devaluation of sterling were felt and for the first half of the year, British Overseas Airways corporation was still without most of the new aircraft on which it had counted. Not until November was this handicap fully removed. At that point, the corporation ceased to operate flying-boats and all its services thenceforward were flown by land aircraft. These were expected to produce economies both in the cost of operation per ton-mile and through the saving of expense on the maintenance of marine stations on the routes to the far east and to South Africa. British European Airways corporation was not due to receive the first of its new aircraft until early in 1951 and relied on careful management and an energetic sales organization to bring expenditure and revenue more closely together.

For the greater part of the year therefore both corporations were in much the same position of having to use a proportion of old-type aircraft at a time when they wished to develop and increase their services. In common with other operators they sought to increase their traffic and the hours flown by their aircraft by offering cheap return fares during " off " seasons on the long runs and at less popular hours on the short routes. The result was to increase the number of passengers and also the number of capacity ton-miles flown. Unfortunately the rise in capacity exceeded the rise in passenger ton-miles in both corporations, but the extra traffic obtained by B.E.A. through cheap fares appeared to be balancing the direct operating cost of the aircraft employed on the early and late services and so helped to spread administrative costs over a bigger total of ton-miles flown. To this extent the policy justified itself but the dual difficulty of coping with seasonal traffic and of obtaining a big enough average flow of traffic at existing rates to show a profit had still to be solved. B.O.A.C., in the financial year ended March 30, 1950, had a deficit of £7,791,887 and B.E.A.'s deficit in the same year was £1,363,594 or about half that of the previous year. The loss suffered by B.O.A.C. included that of British South American Airways corporation (subsequently amalgamated with B.O.A.C.) and a sum of about £1,750,000 was accounted for by the grounding of the Avro Tudor aircraft which B.S.A.A. had been using.



A British European Airways helicopter arriving at Speke airport, Liverpool, from Cardiff to inaugurate the first permanent passenger service by helicopter on June 1, 1950.

From November B.O.A.C. was fully re-equipped. It had received its overdue Stratocruisers and Hermes IVs. It had been able in the summer to increase its services between London and New York from seven to eight a week. From November, it used a new landplane route between London and Johannesburg. Three times a week this route was by way of Tripoli, Kano, Brazzaville and Livingstone, and twice a week the more familiar route through Cairo, Khartoum and Nairobi was used. At the same time the corporation had completed its administrative reorganization and its plan for reducing expenditure by reducing staff and by re-grading some of its employees. In the course of three years its staff had been reduced from 24,000 to about 17,000 and some of the employees remaining had accepted salary reductions of up to 25%.

Prospects of prosperity appeared to be improving although the ratio of pay load to capacity in the latter part of the year was still not good enough to promise a profit. This situation lent special interest to the additional aircraft the corporation would put into commission during the next three years. Early in 1952 the de Havilland Comet jet air liner was likely to begin operations on the Australia route and to reduce the journey time by about half. This was expected to attract passengers and help to increase the average pay load, but it

would also throw into greater prominence the question of differential fares. By 1953 the big Princess flying-boats were expected to be ready. The corporation had already set up a unit to prepare for their advent and therefore presumably intended to use them from the old flying-boat base at Southampton. By the end of 1950 the corporation was better equipped to meet competition and to bring cost of operation per ton-mile nearer that of other lines which had modern aircraft. The task before it was to increase revenue by obtaining more traffic and to keep costs steady in a period of rising prices.

Operating the home and European services, B.E.A. continued to make progress within the limitations imposed by its equipment and to prepare for further development. In the course of the year it lost the right to carry loads to and from Lisbon through the insistence of Portugal on her right to carry half the available traffic between London and Lisbon. As B.O.A.C. was calling regularly at Lisbon and was able to handle all the traffic left under this arrangement B.E.A. agreed to discontinue its services. In their place it opened services to Madrid. On other European routes the corporation's business was generally bigger than in 1949. In the summer months the traffic increased by about 30%, part of the increase being accounted for by cheap fares on early and late services. Home services were much less profitable and there were signs at the end of the year that the corporation intended temporarily to resign a bigger proportion of the home routes to private operators licensed as "associates" of the corporation. In 1950 some 48 routes were operated by associates. The corporation announced in November that it intended to take over six of those routes but was prepared to recommend that more than 70 of the smaller routes should be allocated in 1951 to associates. At the same time B.E.A. had given a contract for the modification of its fleet of 28 Douglas DC-3s to permit this type to be worked by a crew of two instead of the normal crew of three.

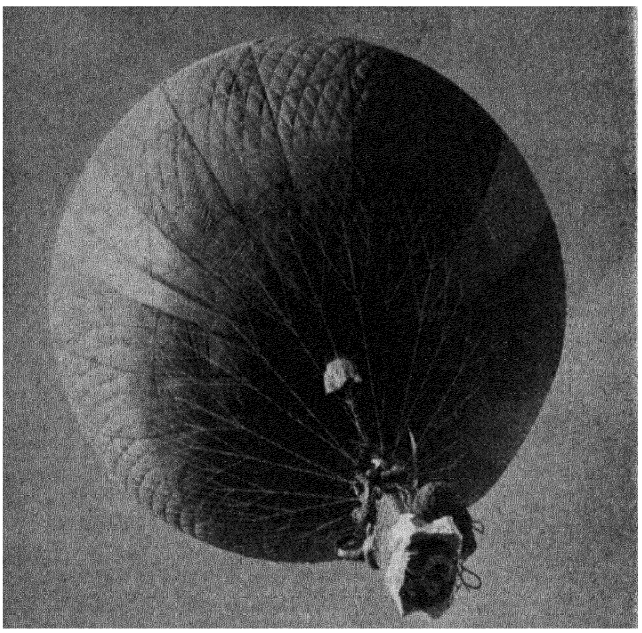
This evident attempt to reduce the cost of operation in 1951 was also a temporary expedient, for the corporation had placed an order for 14 four-engine Miles Marathon liners intended to carry 12 to 14 passengers and to operate from the small aerodromes on the minor home routes. By its experimental service of helicopters between Liverpool and Cardiff, the corporation also showed its ultimate belief in the helicopter as the vehicle for most air services with stages of less than 200 mi. This daily helicopter service did not show a profit but as the corporation was paid a fee for some operational research work undertaken in the course of the service, the net loss was small enough to be offset reasonably against the experience gained. The six-month contract for the carriage of night mails by helicopter between Peterborough and Norwich which ended in April was both profitable and successful. This service, flown throughout the winter months, with a ban on operations when the cloud base was below 500 ft. or the visibility less than half a mile, achieved a regularity record of 96·6%.

Another hint of developments to come was seen in the use for brief periods on two routes of the new Vickers Viscount turbo-prop liner. This was operated on regular services for one week on the Edinburgh route and for two weeks on the Paris route. Soon afterwards a firm order was placed for 28 Viscounts with provision for deliveries to begin late in 1952. Preparations were also made for putting the Airspeed Ambassador liners into service in the spring of 1951 for the carriage of big holiday loads particularly between London and Paris. The Ambassador was intended to carry 50% more passengers than the Viking at a cruising speed about 60 m.p.h. faster. B.E.A. also used the year to consolidate earlier economies. Its staff, reduced from 7,800 to about 6,500, remained steady and proved adequate to deal with the increased traffic. The corporation suffered two serious accidents involving the loss of a Viking and a DC-3, with the death of nearly all on board. Another Viking, badly damaged by a bomb apparently placed by a passenger in the lavatory, was brought safely back to London. Its captain was subsequently decorated with the George Medal.

TABLE I. UNITED KINGDOM CIVIL AIR TRAFFIC

	All services*		Internal services		External services	
	1949	1950†	1949	1950†	1949	1950†
Mi. flown ('000) .	44,257	48,229	6,006	6,952	38,251	41,277
Pass. carried ('000)	921	1,156	453	486	468	670
Pass.-mi. ('000) .	614,659	793,724	72,432	80,896	542,227	712,828
Freight carried (tons)	14,148	19,337	1,756	2,280	12,392	17,110
Freight ('000 tons)	18,085	21,905	329	427	17,756	21,478
Mail carried (tons)	5,297	6,481	1,233	1,413	4,064	5,068
Mail ('000 ton-mi.)	10,557	12.111	205	234	10,352	11,877

* BOAC, BEAC and associate companies. † Provisional.



The French balloon pilot, Charles Dolfuss, making an ascent over Stockholm in 1950 to celebrate the 50th anniversary of the Fédération Aéronautique Internationale.

Independent air operators also had a year of fair activity. Besides acting as associates of B.E.A., several were engaged at times of pressure to help with the regular services or the freight-carrying of the two corporations. They were busy too with a great variety of private charters. Two independent services still run by private operators were the motor-car ferry across the English channel (which handled 4,000 cars and 1,000 motor cycles) and the weekly flying-boat service between England and Madeira. The charter companies in general obtained extra business through the Holy Year pilgrimages to Rome, the Council of Europe at Strasbourg and holidays organized by tourist agents, student bodies and the Boy Scouts association. One company obtained a contract from the War Office to carry troops between England and west Africa. Others included in their loads Arab ponies from Iraq and cattle and pigs from Italy and Greece. There was some development of the dusting and spraying of crops from the air and an experiment was made in the treatment of hill land near Plynlymon with superphosphate pellets.

In the handling, supervision and control of commercial aircraft over the United Kingdom there were some important improvements. Early in the year a new radar station with a range of 140 mi. was established at London airport, its purpose that of monitoring traffic over the southern part of England and of helping liner captains in that area with

TABLE II. REVENUE STATISTICS FOR BRITISH AIR LINES
(Financial years, April 1-March 31)

	B.O.A.C.		B.E.A.C.	
	1948-49*	1949-50	1948-49	1949-50
	£	£	£	£
Operating revenue	17,717,220	19,530,584	5,312,654	6,884,935
Operating expense	24,962,497	26,102,495	7,820,927	8,104,285
Operating deficit	7,245,277	6,571,911	2,508,273	1,219,350
Non-operating expense	560,697	1,219,976	226,565	91,472
Total deficit	7,805,974	7,791,887	2,734,838	1,310,822

* 1948-49 figures are those shown in the corporation's report and accounts for 1949-50, and exclude from non-operating expense profit on disposal of assets and redemption of stock. The total deficit for B.O.A.C./B.S.A.A.C. as shown in the 1948-49 accounts is £6,977,777.

information about their position, height and bearing. A plan was also announced for creating a series of seven traffic lanes leading into the chief air traffic centres in England, Scotland and Northern Ireland, the intention being to equip each lane with radio ranges to enable pilots to fix with a high degree of accuracy their positions in the approach lanes. The first lane was brought into use in August. In September the ground-controlled approach team at Northolt brought in their ten thousandth aircraft to a safe landing.

Within the Commonwealth there was some expansion and the promise of more. Canada was engaged for some months in negotiations with the United States arising out of her proposal to run services to New York. This was resisted by the United States line already handling this traffic; but Canada, strengthened by her recent acquisition of Newfoundland and consequent control of Gander airport, pressed her claim and was allowed to open her service in April. About the same time Trans-Canada Airlines had second thoughts about its plans to order Avro Jetliners (made in Canada) for its main services. Up to the end of the year the outcome of this reconsideration had not been announced. The privately owned Trans-Pacific Airways, which had already ordered two Comet jet airliners for its proposed service from Vancouver to Tokyo by way of the Aleutian islands, found itself in some difficulty by the decision of the U.S. not to continue to maintain certain bases along that line.

Australia too showed an interest in the Comet and also in the Indian ocean route from Western Australia to Johannesburg, touching at the Cocos islands and Mauritius, but nothing had been settled on either point by the end of the year. On its existing services Qantas Empire Airways made a profit in the previous complete year. Towards the end of the year Tasman Empire Airways opened a service between Sydney and Christchurch and so for the first time linked New Zealand's south island with Australia by a regular line. There were other plans for services between Christchurch and Melbourne, and between Wellington and Sydney. New services with flying-boats were also being organized from Australia to the Solomon islands, the New Hebrides, New Caledonia and various other islands. Inside Australia there was little development, but there were signs that the government-owned Trans-Australian Airlines might make a profit on the year's work. Australian National Airlines operated a beef service between the killing station at Glenroy and the port of Wyndham, a run of 180 mi. More than two million lb. of meat was carried in the five-month season and the advantages over the old method of delivering the beef "on the hoof" were proved. This company also became a minority shareholder in Air Ceylon, established to operate long distance services. In New Zealand the state-owned National Airways was offered for sale by the new government.

The chief event in Africa was the completion of the big airport at Livingstone and the removal of flying-boats from the main routes. The two corporations serving central and east Africa with their bases at Nairobi continued to expand. India, was, if anything, over-served with air transport. Among its 16 companies there was little prosperity and a new government policy on air transport was expected. Difficulty in communications between Assam and Calcutta arising from the creation of East Pakistan was relieved to a large extent by air transport. Similar enterprise was shown in Pakistan in the operation of a service from Peshawar to Gilgit following the valley of the Indus through the mountains of the northwest frontier.

European air operators generally had a difficult time during the year. For the first time in recent years K.L.M.* failed to make a profit. There were doubts as to whether Sabena† would show a profit. Discussions took place between these two companies and Swissair with a view to a closer pooling arrangement to embrace aircraft maintenance and stocks of spares. The three Scandinavian companies also drew closer together in search of further co-operative economies. France alone undertook expansion, acquiring additional U.S. as well as home-produced aircraft and plunging boldly ahead with a

* K.L.M. = Koninklijke Luchtvaart Maatschappij (Royal Dutch Air Lines).
† S.A.B.E.N.A. = Société Anonyme Belge d'Exploitation de la Navigation Aérienne.



The British European Airways Vickers Viscount at Le Bourget airport, Paris, July 28, 1950, after flying from London. This was the first scheduled passenger service in the world by a turbo-prop airliner.

scheme of differential fares based on aircraft seating arrangements. Air France and its associates were reported to have seven different fare scales by the end of the year. (E. C. SD.)

United States. An analysis of 226 air lines in operation throughout the world in April 1950, of which 55 were U.S.-operated and 171 operated by other countries, shows that four-fifths of the world's scheduled air line services were being conducted with U.S.-built aircraft. While the U.S. share of the total scheduled aircraft-miles dropped to 48% from 52% in the previous year, air lines operating under the U.S. flag had increased their revenue ton-mile capacity by 8% during the year, and by 35% since 1948. It was expected that still further substantial additions to the U.S. civil fleet would result from the faster and larger versions of air transports which were on order for delivery during 1951 and 1952, including more than 100 Douglas DC-6Bs and Lockheed Constellation 1049s.

The U.S. civil air line industry experienced its best year since the end of World War II. International and domestic scheduled air carriers made traffic gains comparable to, or greater than, those reported in the record year of 1949. Total operating revenues increased about 8%, while operating expenses increased about 5%. This difference largely accounted for a 47% increase in net operating income to a total of $66·8 million, a far cry from the heavy operating deficits of 1946 and 1947. Collectively, the industry added 16·7% in passenger-miles over 1949, 11·6% in mail ton-miles and 19·7% in cargo services, including express and freight. Altogether, 18,828,000 passenger runs were reported, while total revenue loads, including passengers, mail and cargo, reached a record figure of 1,230 million ton-mi., a 16·8% increase from 1949.

TABLE III. U.S. SCHEDULED AIR CARRIER OPERATIONS

	1949 (actual)	1950 (estimate)
Revenue passengers carried	16,600,771	18,828,000
Domestic	15,080,704	17,162,000
International	1,520,067	1,666,000
Revenue miles flown	456,165,882	460,453,000
Domestic	351,639,998	367,184,000
International	104,525,884	93,269,000
Revenue passenger-miles flown	8,806,576,000	10,115,000,000
Domestic	6,752,578,000	7,929,000,000
International	2,053,998,000	2,186,000,000
Passenger-miles flown	9,233,945,000	10,600,000,000
Domestic	7,065,146,000	8,283,000,000
International	2,168,799,000	2,317,000,000
Ton-miles of express carried	77,217,799	80,740,000
Domestic	27,773,669	37,010,000
International	49,444,130	43,730,000
Ton-miles of freight carried	101,969,397	136,119,000
Domestic	95,227,983	120,519,000
International	6,741,414	15,600,000

The distribution of revenues among the three principal sources of traffic for the scheduled air carriers remained about the same in 1950 as in 1949, passengers accounting for 73%, mail for approximately 17·5% and cargo for 6·7%. Average unit receipts for freight dropped to slightly less than 19 cents a ton-mile for the first time, reflecting the increasing volume of back-haul freight movement at special commodity rates.

The 16 domestic trunk lines alone more than doubled their net operating income, from approximately $25 million in 1949 to more than $51 million in 1950. The 12 local-service air lines had an operating net of $500,000, in round figures, contrasted with a loss of about the same amount during the previous year. The 13 international and overseas air lines, on the other hand, showed a decline of about 28%, to a net operating income of $15·3 million for the year. Nevertheless, Pan American World Airways reported that its 1950 traffic volume was the greatest in its 24-year history. The company transported more than a million passengers and 50 million lb. of cargo during the year, in addition to military contract operations on the trans-Pacific Korean air lift.

The year witnessed a continuous and gradual extension of air coach operations on the part of the scheduled carriers, while the "irregulars," or non-scheduled operators, found it more and more difficult to maintain their services in the face of the stiffening restrictions of the Civil Aeronautics board. During the spring, T.W.A. (Transcontinental and Western Air, Inc.) and American Airlines began using modern high-speed Constellations and DC-6 type equipment with high-density seating in New York-Los Angeles coach operation. In July they both reported load factors of more than 90% and bookings several weeks in advance. Ten major air lines were offering coach service on various routes, reaching 32 domestic cities in July 1950, including 16 out of the 20 leading traffic-generating points. Load factors on the Los Angeles-San Francisco run were particularly heavy, with fares as low as 3 cents a mile.

For the first four months of 1950, revenue passenger-miles on air coach services showed a tenfold increase over a similar period in 1948. In fact, much of the increase in total passenger air traffic during the year came from air coach service. Altogether, domestic air lines carried some 48·5% of the total U.S. first class rail and air travel market in 1950, compared with 43% in 1949.

TABLE IV. U.S. SCHEDULED AIR CARRIER OPERATING REVENUES AND INCOME

	1949	1950 (*est.*)
Operating revenues	$755,877,711	$813,210,000
Operating expenses	710,402,051	746,410,000
Net operating income	45,475,660	66,800,000
Revenue ton-mile receipts—average	57·36 cents	54·7 cents
Revenue ton-mile expenses—average	54·29 cents	49·4 cents
Passenger-mile receipts	5·76 cents	5·5 cents
Mail ton-mile receipts	110·17 cents	103·6 cents
Express ton-mile receipts	32·78 cents	33·9 cents
Freight ton-mile receipts	19·46 cents	19·0 cents

U.S. domestic scheduled services maintained their high safety record of recent years with only four fatal accidents, the same number as in 1949. On the basis of passenger fatalities this was a rate of 1·2 per 100 million passenger-miles flown in domestic operations, compared with 1·3 for the previous year. One accident in 1950, involving a U.S. aircraft flying outside the U.S.A., resulted in 48 deaths and brought the combined over-all rate to 1·4, compared with 1·0 in 1949.

The year 1950 marked a definite turning point in the history of the private-plane industry in which sales had diminished since 1946. Based on official statistics for the first 11 months, and unofficial reports for December, the total number of private aircraft sold during the year exceeded 3,400, with a manufacturer's value of about $18·5 million. This compared with 3,370 sold in 1949 and valued at $14,324,000. The increase in dollar volume reflected the demand for the larger types of four- and five-seater models used mainly by business executives. About 100 helicopters were built during the year for military and commercial purposes. The use of light aircraft for agricultural purposes continued to grow; about 10,500 planes were owned by farmers and ranchers.

In general, flying schools and fixed-base operators found 1950 a difficult year. The number of student pilots dropped off as ex-service applicants decreased. There was a 17% decline in the number of private pilot certificates issued from more than 30,000 to 25,000—and a 29% reduction in the number of commercial pilot certificates issued.

During the second half of the year, the shadow of the Korean war and the mobilization activities to which it gave rise made still more uncertain the immediate outlook for civil aviation that was not directly or indirectly related to the defence effort.

As the year closed, the Civil Aeronautics administration made compulsory the filing of flight plans for planes entering, or flying within, designated air defence identification zones. Areas affected were: a zone several miles in diameter around each atomic energy plant; zones surrounding the cities of San Francisco and Los Angeles; and zones covering the Atlantic and Pacific ocean areas seaward to a line about 20 mi. off-shore. Flight plans were also required for planes entering the United States from Canada east of Wisconsin.

For the first time since the end of World War II the use of civilian aviation flight and ground schools was planned for large-scale training of air force personnel. About 10,400 U.S. air force technicians were to be trained in civilian trade schools by July 1951; and contract training of a minimum of 2,250 basic flight cadets was announced at five fields to be operated by civilian flight-school contractors.

The C.A.A. Federal Aid Airport programme went on a defence footing, 1950-51 projects being screened to meet the cuts in non-defence construction. Grant agreements entered into during 1950 numbered 598, involving $40·6 million in federal funds. Projects completed during the year numbered 452 on which $27·3 million in federal funds had been expended.

Employment in the basic aircraft industry, which totalled about 256,000 in June 1950, was expected to reach 500,000 by mid-1951. (J. P. V. Z.)

AVIATION, MILITARY: *see* AIR FORCES OF THE WORLD.

AZORES: *see* PORTUGAL.

BACTERIOLOGY. Vitamin B_{12} simultaneously produced with streptomycin had proved of great value in the treatment of pernicious anaemia. Maximum stimulation of haematopoiesis occurs when folic acid, a bacterial metabolite, is administered with vitamin B_{12}. It appeared that both substances were produced by bacteria normally residing in the intestines and that defective absorption might result in deficient blood formation. A growth-stimulating substance present in aureomycin concentrates produced by *Streptomyces aureofaciens* identified as "animal protein factor" was an entirely new entity in the field of fermentations. Consumption of this factor by poultry and pigs results in 20% greater growth with unusually high meat quality and increases the vigour and growth of calves. The discovery might revolutionize the preparation of manufactured feed for animals and poultry and create a new industry for producing the factor.

Immunity in Syphilis. A substance present in blood of infected individuals, called reagin, had been of inestimable value in the serological tests for diagnosis of syphilis, but reagins are not true antibodies in that they offer no protection and are of little value in the study of immunological mechanisms. A protective antibody, which has an immobilizing effect on *Treponema pallidum*, appears in the sera of experimentally infected and treated animals. The level of immunity is directly correlated with the immobilizing power of the serum. Disclosure of these data offered for the first time a research tool for more detailed studies of syphilis immunity in man.

Antibiotic Resistance and Dependence. The development of resistance of many bacteria to streptomycin has been demonstrated both experimentally and in the course of therapy in human infections. Whether this is a result of natural selection according to Darwinian principles with survival and overgrowth of resistant individual cells, or the outcome of acquired resistance in the manner of Lamarchianism, was still being debated in 1950. The ultimate in this tendency of the bacterial organisms to withstand streptomycin was reached when it was reported that many bacteria actually become streptomycin-dependent and fail to grow in its absence. Similar phenomena were also observed with one of the newer antibiotics. Chloramphenicol resistance and dependence was shown for *Klebsiella pneumoniae*, and bacitracin resistance was observed to develop in many strains of beta haemolytic streptococci. Since these antibiotics had already enjoyed rather extensive clinical use the isolated reports lent support to the view that the newer antibiotics would not lead to frequent development of resistant strains of pathogenic organisms as had been the common observation in streptomycin therapy.

Poliomyelitis. Attempts to develop a vaccine for poliomyelitis had been thwarted by difficulties encountered in cultivating the virus in sufficient quantity and by the existence of many yet unrecognized immunologically distinct strains of the virus. A report on the successful propagation of the virus in a test tube on human placental tissue might be an important step toward removing mysteries surrounding the disease and might facilitate attempts to produce a vaccine. Likewise the isolation of strains in addition to the three reported should be more readily accomplished. A vaccine to be successful must have immunizing potentialities against all strains of the virus. Some hope from new data was extended to the use of ultra-violet irradiation to attenuate the virus for purposes of vaccine production. (M. N.)

BADMINTON. National and international championship tournaments took place during 1950 in all continents of the globe. In the most important of these, the 40th all-England championships in London in March, the winners were Wong Peng Soon (Malaya) and Fru Tonny Ahm (Denmark) in the singles; and Jorn Skaarup and Preben Dabelsteen (Denmark), Fru Ahm and Frk. Kirsten Thorndahl (Denmark) and Poul Holm and Fru Ahm (Denmark) in the doubles events. In international matches England defeated Ireland and Scotland, but was beaten by Denmark and Sweden. Ireland defeated Scotland, and for the first time New Zealand got the better of Australia.

Thirty-four counties took part in the English inter-county championship which was again won by Cheshire with a close win over Surrey in the final. Essex headed Division II.

A new departure instituted by the Badminton Association of England was the holding of the first all-England junior championships in January; in these 118 competitors took part. A large number of other tournaments took place all over the United Kingdom, and all attracted increasing numbers of players. Eighteen national associations were members of the International Badminton federation, and most of them were expected to take part in the championship for the Thomas cup in Malaya in 1951. (H. A. E. S.)

BAHAMAS. British colony, an archipelago of about 700 islands, of which New Providence is the most important, outside the Gulf of Mexico and off the coast of Florida. Area: 4,403 sq.mi. Pop.: (1943 census) 68,846; (1948 est.) 76,620. Language: English. Capital: Nassau. Administration: governor; executive council; Legislative Council of 9 unofficial nominated members and House of Assembly of 29 elected members. Governors (1950), Sir George Ritchie Sandford and, from Dec. 7, Major General R. A. R. Neville.

History. Butlin's vacation village at West End, Grand Bahama, opened early in the year and as a result of the increase in facilities the colony experienced a record tourist season: by the end of July the number of visitors was already 10,000 greater than for the whole of 1949. But in the autumn it was learnt that the future of the village was endangered by lack of capital to ensure its completion. Petitions were presented for the winding up of the company, but judgment was postponed pending the outcome of various efforts to

raise extra capital, and the outcome was still undecided at the end of the year. An agreement was signed permitting the U.S. jointly with the United Kingdom to establish and operate technical and supporting facilities at selected sites in the colony for a guided missile range to be known as "Bahamas long-range proving ground." The Colonial Development corporation announced that it had launched an agricultural undertaking to make the colony to a large extent self-supporting in food; the plans envisaged projects on three of the main islands, Eleuthera, Andros and Abaco; the capital authorized up to October, including the purchase of the land and buildings at Eleuthera, was £1,034,000.

Finance and Trade. Currency: pound sterling; U.S. currency also generally accepted. Budget: revenue (1950 est.) £1,315,760; expenditure (1950 est.) £1,649,573. Foreign trade (1949): imports £4,775,789; domestic exports £488,365; re-exports £172,448. Principal exports: lumber, tomatoes, salt and crawfish; the economy of the colony was primarily dependent on the tourist industry. (J. A. Hu.)

BAHREIN ISLANDS: *see* Arabia.

BAKERY PRODUCTS: *see* Bread and Bakery Products.

BALANCE OF PAYMENTS. During 1950 the world outside the United States substantially improved its position in the balance of payments, and its reserve position was strengthened.

Closer balance was established after the widespread currency devaluation of Sept. 1949, by countries accounting for nearly two-thirds of world trade. The basic cause of the devaluations was the postwar distortion in international payments, of which the most obvious symptom was a world shortage of U.S. dollars: in 1949 the surplus of the U.S. with the rest of the world for goods and services amounted to $6,200 million. This surplus was reduced in the first half of 1950 to an annual rate of $3,000 million and in the third quarter of 1950 to an annual rate of less than $300 million. It would be premature however to assume that this widespread improvement meant the achievement of a new equilibrium. In the 12 months' period ending with Sept. 1950 countries other than the United States were able to increase their gold and dollar holdings by an amount of about $3,750 million, of which $3,000 million resulted from transactions with the U.S. and the rest from new gold production. Countries benefiting from rising exports and by the inflow of speculative capital gained most of the gold and dollars, such as Canada ($900 million), the sterling area ($1,300 million excluding the Union of South Africa) and also some of the Latin American countries.

Devaluation improved the competitive position of the devaluing countries. But it was only one of the factors that improved the foreign balances of payments with the U.S. Other important factors were: (1) the continuing U.S. government aid to foreign countries at a rate of more than $4,500 million a year; (2) reduction of foreign purchases from the U.S. in order to conserve dollar resources; and (3) an increase in the imports of the U.S. This last was facilitated by the high level of business activity in the U.S. as well as by the improvement, due to devaluation, in the competitive position of the exporting countries. There was indeed since devaluation an expansion in the volume of Europe's exports not only to the U.S. but also to overseas countries in general in relation to imports. The advantages of this were however offset by a deterioration of about 10-15% in Europe's terms of trade with overseas countries, brought about by devaluation. Therefore the improvement in the gold and dollar holdings of Europe could not be explained primarily by changes in the balance of merchandise trade but rather by shifts in the pattern of trade by an improvement in service and capital transactions and by an inflow of speculative capital.

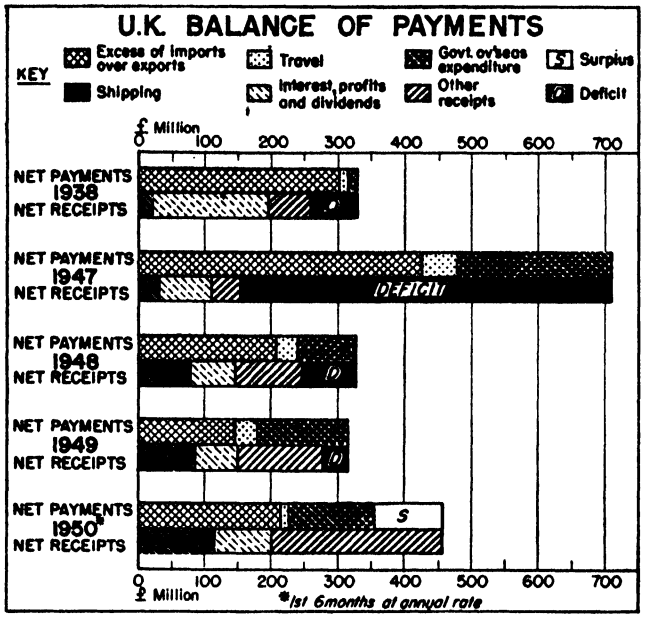
The Sterling Area. Because of the United Kingdom's central position in world trade and the importance of sterling as an international currency the most important development of 1950 was the improvement of the position of the sterling area in general and of the United Kingdom in particular in the balance of payments. This improvement was illustrated by the sterling area's earning a net gold and dollar surplus of $220 million in the first half of 1950 as against deficits of $962 million and $570 million in the first and second halves of 1949 respectively. The United Kingdom's contribution to this was a drastic reduction in its net gold and dollar deficit. A further major contribution came from the earnings of the overseas sterling areas, made possible by the increase in demand for and prices of their products (such as tin, rubber, wool, etc.) as well as by their sale of gold to the United Kingdom.

The actual increase of the gold and dollar reserves of the sterling area was, of course, greater than the net gold and dollar surplus earned. It amounted to $735 million in Jan.-June 1950 as a result of Marshall aid ($426 million) and of drawing on the line of Canadian credit ($45 million) and also because of certain smaller items. This net addition to the gold and dollar reserves could be compared with a reduction of such reserves to the extent of $205 million in the first half of 1949 and an addition of $37 million in the second half of 1949. There was a further increase of $878 million in the second half of 1950, made up of $293 million in Marshall aid and $585 million surplus earned by the sterling area, including the United Kingdom. Part of this increase in the fourth quarter was due to special factors such as an inflow of funds from North America in anticipation of future commercial needs. Total reserves amounted to $3,300 million on Dec. 31, 1950, nearly treble the reserves just before devaluation. In view of the great improvement in the dollar position of the sterling area and in view of the launching of the Mutual Defence Aid programme by the United States, it was mutually agreed to suspend Marshall aid to the United Kingdom from Jan. 1, 1951.

United Kingdom Current Account. The improvement of the United Kingdom's position in the balance of payments with the world at large on current account is shown in Table I. It showed a surplus of £52 million in the first half of the year, against a surplus of £16 million in the first half of 1949 and a deficit of £54 million in the second half of 1949. It was estimated that the surplus for 1950 as a whole was of the order of £200 million-£250 million, a striking result compared with a deficit of £38 million for 1949.

It was even more important that the United Kingdom succeeded in reducing its deficit on current account with the dollar area to £52 million (in the first six months of 1950) as against £142 million and £160 million (in the first and second halves of 1949 respectively).

The improvement in the first half of 1950 was not in the visible balance of current transactions, which is made up of the difference between United Kingdom exports and imports both valued at f.o.b. prices. The visible items showed a deficit of £108 million in the first half of 1950 as against deficits of £43 million and £104 million in the first and second halves of 1949 respectively, because, although the sterling value of exports increased, that of imports increased even more. But even in this period the United Kingdom succeeded in reducing its deficit on visible items with the dollar area to £71 million in the first half of 1950 as against £111 million and £140 million in the first and second halves of 1949 respectively, both by reducing imports and increasing exports. In the second half of the year a sharp improvement in visible trade took place, and towards the end of the year the United Kingdom was earning more on visible exports than it was spending on imports. In 1950 the volume of British exports



was 16% more than that of 1949, a substantial achievement, while the volume of British imports was only 1% more. Also the expansion of exports to the dollar area was greater than the expansion to other areas. This was however counterbalanced by the marked deterioration in the terms of trade of the United Kingdom. In 1950 export prices increased by 6% as compared with the average for 1949, while import prices increased by 17%.

Improvement for the United Kingdom in the first half of 1950 was most marked in the balance of invisible items, which showed a surplus of £160 million as against £59 million and £50 million in the first and second halves of 1949. Net income from shipping and from interest, profits and dividends increased a little; the net deficit on travel and total government transactions abroad remained about the same as in the first half of 1949; but the mixed bag of other net income increased to £137 million from £75 million and £84 million, mainly reflecting increased income of oil and insurance companies operating abroad. The United Kingdom earned a surplus of £19 million on its invisible balance with the dollar area against a deficit of £31 million and £20 million.

United Kingdom Capital Account. The way in which the surpluses and deficits in the current accounts were financed and the changes in the capital accounts of the United Kingdom are shown in the second part of Table I.

An important change on the debit side of the capital account was the further increase in the short-term sterling liabilities bringing them to £3,471 million at the end of June 1950, as against £3,340 million at the end of Dec. 1949. The sterling-area countries remained the largest creditors of these balances, owning £2,497 millions. The non-sterling area countries owned balances to the extent of £974 million. Releases continued to be made and negotiations with various creditors took place in 1950, but no general arrangement was made for the final settlement of these balances. In fact the pressure for such an arrangement diminished as countries became more willing to hold their balances in sterling than before the devaluation. A block of balances owned centrally by the monetary authorities of O.E.E.C. countries on July 1, 1950, amounting to £200 million, was swept into the European Payments union, to be used by the United Kingdom's creditors to cover their deficits.

Another step towards settling these balances was contained on the so-called Colombo plan, which envisaged a reduction of the sterling balances of India, Pakistan and Ceylon by £246 million within six years, these releases forming part of the funds for developing the Commonwealth countries of southern and southeastern Asia.

European Payments Union. An important new development in 1950 was the setting up of the European Payments union to be started as from July 1, 1950, thus replacing two previous intra-European payments agreements. For the first time the clearing arrangement was wholly multilateral and automatic. The principle was that the surpluses earned by one country in any other one should be expendable in all other countries, including the non-European monetary areas (*e.g.*, as far as the United Kingdom was concerned, the whole sterling area). This arrangement, together with the liberalization of trade also agreed-to in 1950, was expected to facilitate a return towards multilateral trade in western Europe and to lead to the abandonment of discrimination between soft- and hard-currency countries.

Each country was allotted a quota which reflected its weight in intra-European trade and represented the field within which whatever surpluses or deficits arose were to be

TABLE I. UNITED KINGDOM BALANCE OF PAYMENTS, 1946 TO 1950
(£ million)

	1946	1947	1948	1949 Jan.-June.	1949 July-Dec.	1950 Jan.-June (provisional)
A. CURRENT ACCOUNT						
Debits						
1. Imports (f.o.b.)	1,081	1,560	1,790	958	1,007	1,150
2. Shipping	137	165	174	95	97	96
3. Interest, profits and dividends	83	94	102	52	53	55
4. Travel	42	76	66	27	46	32
5. Migrants' funds, legacies, private gifts (net)	—15	46	44	18	13	8
6. Government transactions (net)	363	230	87	64	76	63
7. Total debits	1,691	2,171	2,263	1,214	1,292	1,404
Credits						
8. Exports and re-exports (f.o.b.)	905	1,135	1,583	915	903	1,042
9. Shipping	166	198	250	142	138	153
10. Interest, profits, dividends	153	171	174	78	89	98
11. Travel	13	21	33	20	24	26
12. Other (net)	106	88	143	75	84	137
13. Total credits	1,343	1,613	2,183	1,230	1,238	1,456
14. *Balance of current transactions* (credit +, debit —):	*—348*	*—558*	*—80*	*+16*	*—54*	*+52*
of which						
(*a*) visible trade	—176	—425	—207	—43	—104	—108
(*b*) invisible	—712	—133	+127	+59	+50	+160
B. INVESTMENT AND FINANCING ACCOUNT						
1. Grants, etc. (to U.K. —)	—	—30	—138	—71	—83	—111
2. Overseas investment, borrowing, etc. (investment by U.K.+)	—370	—141	—93	+8	+286	+16
3. Sterling liabilities, etc. (increase, —).	—31	—235	+205	+130	—305	—115
4. Gold and dollar reserves (increase, +)	+53	—152	—54	—51	+48	+262
5. *Total of investment and financing*	—348	—558	—80	+16	—54	+52
of which net change in capital account (B2-4 above: investment +, disinvestment—)	—348	—528	+58	+87	+29	+163

SOURCE: *United Kingdom Balance of Payments, 1946 to 1950* (H.M.S.O., London, 1950). Reproduced by kind permission of the Controller, H.M. Stationery Office.

TABLE II. UNITED KINGDOM CURRENT ACCOUNT: DISTRIBUTION BY AREAS (£ million)

	1949		1950
	Jan.-June	July-Dec.	Jan.-June
Dollar area:			
visibles	—111	—140	—71
invisibles	—31	—20	+19
Sterling area:			
visibles	+78	+78	+13
invisibles	+57	+42	+67
O.E.E.C. area:			
visibles	— 9	—31	+17
invisibles	+20	+ 2	+34
Others:			
visibles	— 1	—11	—67
invisibles	+13	+26	+40

settled by a combination of credit and gold payments in the course of E.P.U.'s operations. An excess beyond the quota had to be settled at once in full in gold.

In order to secure the smooth working of E.P.U., a working capital fund of dollars (together with certain other guarantees) was provided by the United States. This fund was moreover supplemented by European currencies in the form of drawing-rights granted by certain creditor countries such as the United Kingdom, Belgium, etc. At the same time certain chronic debtor countries were given an initial credit balance in the books of E.P.U.

The first six months of the operation of E.P.U. showed rather the impact of the uncertainties of the period than the normal way in which E.P.U. was expected to operate. In this period Germany incurred a heavy net debit and was offered a special short-term credit on condition that it put its own house in order. France and the United Kingdom earned a substantial cumulative surplus and both received gold from the union. (The United Kingdom moreover discharged its initial debt incurred by granting drawing rights.)

Rearmament. In the second part of 1950 the immediate effect of the Korean war and the new drive for rearmament by the western world was to give a further impetus to U.S. purchases abroad, especially to purchases of strategic materials, and to make probable the continuation of U.S. government aid in one form or another—both factors improving the foreign dollar position. But rearmament imposed a new strain on the economies of the countries of western Europe, competed with exports, home consumption and investment and also increased the demand for dollars and dollar goods. However, the search for the long-term solution of an equilibrium in international payments continued. One step in this search was the " Report to the President of the U.S. on Foreign Economic Policies " prepared at the request of the president by Gordon Gray. This report emphasized the importance of western Europe's keeping up its competitive strength in order to ensure adequate export markets. But it also emphasized the need for the U.S. to increase its imports and to secure an adequate outflow of capital, by such methods as increased lending by the International Bank for Reconstruction and Development and the Export-Import bank (*qq.v.*) as well as by grants and additional appropriations for the development of under-developed areas. (L. Rs.)

See International Monetary Fund, *Balance of Payments Yearbook*.

BALLET: *see* DANCE.

BANK FOR INTERNATIONAL SETTLEMENTS. Celebrating in 1950 the 20th anniversary of its foundation, the bank could justifiably claim to have lived down the hostility to its origins and purposes evident in many countries at the end of World War II. No decisive steps having been taken by the countries concerned to resolve the problems of German prewar debts, the bank took measures to segregate assets and liabilities connected with the execution of the Hague agreement of 1930 on German reparations, the intention being to facilitate the development of banking business by enabling a clear and complete view of the bank to be obtained. The balance sheet presentation was altered accordingly.

BANK FOR INTERNATIONAL SETTLEMENTS

	(Million Swiss gold francs, pre-1936 value) March 31, 1950	March 31, 1949
Assets		
Gold in coins and bars	267·6	150·7
Cash and sight funds	44·3	39·2
Bills, acceptances, investments	373·0	233·7
Miscellaneous assets	1·6	1·6
Own Hague investments in Germany	68·3	68·3
	754·8	493·5
Liabilities		
Short-term and sight deposits (gold)	96·8	21·6
Short-term and sight deposits (various currencies)	399·8	220·2
Miscellaneous provisions	113·3	105·8
Reserves (legal and general)	19·9	19·9
Paid-up capital	125·0	125·0
	754·8	493·5
Execution of Hague Convention		
Claims on German banks and other assets	297·2	297·2
Deposits of creditors and other liabilities	297·2	297·2

No new development affecting the sums connected with the Hague agreement occurred during the financial year 1949-50 but returning confidence in the bank resulted in a considerable increase in the amount of deposits entrusted to its care by central banks and other institutions. This, together with the bank's work as agent for the multilateral compensation schemes operated by the Organization for European Economic Co-operation, brought about a heavy expansion in the amount of business handled, turnover at Swiss (gold) Fr. 6,800 million being a record. The net profit, which was placed to reserve, was 18% higher than in 1949 at Swiss (gold) Fr. 6 million.

In July the bank undertook to act as agent, initially until 1953, for the new European Payments union devised by the O.E.E.C. In April Dr. Wilhelm Vocke was elected to the board to represent the central bank of the German Federal republic. (C. H. G. T.)

BANKING. The dislocation of the world prices structure, caused in part by the series of currency devaluations of 1949 and in part by the spectacular expansion of the demand for primary commodities after the opening of the war in Korea, was the main concern of bankers in Great Britain, the Commonwealth, Europe and the middle east in 1950. In the first part of the year the stable financial conditions established in most of the countries in these regions in 1949 with the help of credit-restriction and other official anti-inflationary measures were largely maintained. But, as the upward movement in world prices gathered pace, the volume of money likewise began to expand and fairly large increases in bank deposits were recorded in most countries in the closing months of the year.

The problems created for the commercial banks by the tendency of their total resources to expand were complicated in some countries by the central bank's bringing credit restriction into play to contain inflationary pressures generated by the boom in primary commodities. In a few cases the imposition of credit limitation on the initiative of the central bank led to clashes between the bank and the political authorities. This and the decision of a number of countries to give their central banks greater freedom from governmental control in formulating currency and credit policies focused attention during the year on the question of the degree of

freedom from governmental interference that should, in the national interest, be given to state central banks in these fields. The possibility that new trends in international payments, produced by the distortion of the prices structure and other developments, would lead to the revaluation of certain currencies gave rise to some considerable movements of capital from country to country, with important effects on the volume of bank resources in the countries concerned.

Great Britain. The approximate stability of the credit framework established after the inauguration of Sir Stafford Cripps's disinflation policy in the 1947-48 period was fully maintained during the first part of 1950, the inflationary effect of the rising trend of import prices being neutralized by higher productivity. Contrary to expectations, therefore, the banks' deposits fully reflected the downward pressure normally exerted in the early part of the year by the movement of tax money into the exchequer : the decline in the deposits of the London clearing banks (together these account for some 95% of all commercial bank resources in Britain) between January and June was nearly £100 million larger than during the corresponding period of 1949.

In the second half of the year, however, a rise in internal prices, caused in the main by developments overseas, produced a marked distortion of the credit structure. This, aided by an extensive movement of so-called " hot " money into London inspired by talk of a possible revaluation of sterling, caused a sharp expansion in the volume of bank resources. Net deposits (*i.e.*, published deposits after deducting the duplicating item " balances in course of collection ") showed a drop of nearly £50 million on an annual comparison at the end of June; at the end of October they were higher on the year by nearly £140 million.

ELEVEN LONDON CLEARING BANKS
(£ million)

	Oct. 1948	Oct. 1949	Oct. 1950
Deposits	6,040	6,050	6,204
Net deposits	5,855	5,868	6,006
Cash	485	499	509
Call money	497	556	557
Bill holdings	802	1,162	1,414
Treasury deposit receipts	1,313	744	496
Investments	1,475	1,517	1,505
Advances	1,355	1,466	1,598
Acceptances, etc.	243	261	346

Although the total of bank resources remained fairly stable in Great Britain through the first half of 1950, there were considerable changes during this period in the way in which these resources were deployed. In particular the switch in bank lending from the governmental sector to the private sector of the economy, which had been in progress throughout 1949, was vigorously continued. In the five months to the end of May the rise in bank loans to industry and commerce was the largest in British banking history. Over the same period extensive repayment of official indebtedness to the banking system found a reflection in a sharp net decline in the banks' holdings of money-market assets. With the upward turn in the total of bank resources in the second half of the year, however, the re-deployment of bank resources as between the governmental sector and the private sector was interrupted. By the end of October the figure for banks' loans to industry and commerce had receded some £50 million from the record level reached at the end of June; on the other hand the amount of bank lending to the government had sharply increased.

The striking reversal of well-established trends was not due to changes in government policies: the April budget was based on the principle that the disinflation policy operated through 1948 and 1949 should be continued and official credit policy during 1950 also followed the lines of previous years, no large-scale effort being made by the authorities to influence the volume of bank credit by open-market operations and similar activities. The downward turn in bank loans in the second half of the year was due in large measure to a marked improvement in conditions in the London capital market. This enabled the nationalized industries and other industrial concerns to repay bank loans from the proceeds of new issues of their stock and more than neutralized the increased demand for bank finance from other industrial and commercial firms for carrying stocks which came in the wake of the rise in commodity prices. The expansion in bank lending to the government over the same period was due to seasonal factors and to the influx of capital from abroad. To the extent that the inflow of capital had the effect of swelling the London reserves of overseas central banks, the authorities supplied the sterling required by selling Treasury bills to the banks concerned; *i.e.*, without recourse to the commercial banking system. But where the sterling proceeds of the capital transfer remained on deposit with the commercial banks, the authorities obtained finance to acquire the foreign exchange by borrowing from the commercial banking system.

The possibility that the increased demand for bank loans for financing capital outlays would induce the banks to sell government securities in order to preserve a satisfactory relationship between liquid assets on the one hand and illiquid assets on the other was believed to have been the cause of the official decision to continue the process (begun in 1949) of enabling the banks to reduce their holdings of the inflexible Treasury deposit receipt and to enlarge their holdings of the flexible Treasury bill. The big expansion during the year in the volume of acceptance and similar business handled by the banks was due to the rise in prices, to revaluation rumours and to the wider use of sterling in international payments transactions.

The Commonwealth. The replacement in 1949 of the Labour governments of Australia and New Zealand by governments with conservative views was followed in 1950 by legislative measures in both countries to curb governmental interference with the currency and credit policies of their respective central banks. A bill was introduced into the Australian parliament providing for the removal of the control of monetary policies from the federal treasurer to a reconstituted board of directors of the Commonwealth bank. The board was made responsible for the integration of its own policies with the financial and economic policies of the government; in the event of disagreement between the bank and the government, the matter was to be referred to the governor general of the Commonwealth and the course to be adopted decided upon after full consideration by the cabinet. The same bill made provision for the repeal of the Banking act, 1947, originally introduced by the Labour government of J. B. Chifley to nationalize the trading banks but never enforced. The Reserve Bank Amendment bill introduced by the New Zealand government vested control over the currency and credit policies pursued by the bank in its governor and board of directors. It stipulated that any interference with the bank's policies deemed necessary by the government in the public interest would require specific parliamentary approval.

Inflationary pressures resulted in a considerable expansion in bank resources in most of the Commonwealth countries. In Australia the influx of capital from abroad, which was stimulated by revaluation rumours, combined with a rise in export incomes (caused by the commodity boom) to raise the deposits of the trading banks by some £A 200 million to £A 998 million in the 12 months to Aug. 1950. About half the additional resources were frozen in special accounts with the Commonwealth bank. About £A 50 million was utilized to expand loans to trade and industry. New Zealand banks also witnessed a similarly steady though smaller increase in resources during the year. In South Africa financial

conditions were more stable than in the previous year and bank resources moved within narrower limits. The influx of capital from other parts of the sterling area continued, though at a diminishing rate; and this, with the general increase in business activity, led to a modest increase in bank deposits.

Canadian bank deposits showed a fairly rapid expansion in the first part of the year. This was due to the capital investment boom, to the inflationary effect of price increases in the U.S. and to a heavy inflow of American "hot" money stimulated by expectations that the Canadian dollar would be revalued to parity with the U.S. dollar. Towards the close of the year the dominion authorities took steps to restrict credit, including the raising of the bank rate. Simultaneously the Canadian dollar was freed to discourage the inflow of speculative funds.

In India the banking year was largely uneventful, with total resources showing little net change. Pakistan continued to implement its scheme for building up a comprehensive banking system: the state-sponsored National Bank of Pakistan was set up and entrusted with the task of filling gaps in existing banking facilities. Ceylon established a monetary board to administer and regulate its monetary and banking system.

Europe. The policy of relaxing restrictions on bank credit followed by most European countries throughout 1949 was continued in the early months of 1950. With the development of inflationary pressures in the second half of the year, however, this trend was reversed. Changes in the volume of bank resources were fairly small for France, Italy, the Netherlands, Denmark, Sweden and Norway. But bank deposits rose steadily in Switzerland, partly on account of the inflow of capital. In Belgium, by contrast, an exodus of capital caused by fears of devaluation forced down foreign exchange reserves and the volume of bank deposits. The deterioration in the German external payments situation led the Bank Deutscher Länder to impose severe credit restrictions late in the year. Preparations were made for the establishment of a new German central bank with the object of removing ultimate control over currency and credit policies from the Bank Deutscher Länder to the government.

Middle East. Further steps were taken to implement the plan for converting the National Bank of Egypt into the state's central bank. The deterioration in the internal economic situation created new problems for bankers in Israel. In Iraq, there was a steady increase in the volume of money in circulation, but bank resources showed little change.

(C. H. G. T.)

United States. Banking developments in the U.S. during 1950 were dominated by the gradual rise in business activity during the first part of the year, the sharp upswing in demand for credit after the outbreak of the Korean war and efforts to restrain inflationary credit expansion. New records were set in many banking magnitudes, such as total loans and investments of commercial banks, total loans, total privately held money supply, home mortgage indebtedness and consumer credit outstanding. In 1950 the privately held money supply, which included total bank deposits other than inter-bank and U.S. government deposits, and currency outside banks rose by $6,400 million to reach a new high level of about $176,200 million at the end of the year. Most of the increase was in demand deposits adjusted, in contrast to the preceding year when such deposits had shown little change. Currency outside banks declined by another $200 million. Time deposits in commercial banks, mutual savings banks and postal savings system rose by about $300 million during the year.

Factors responsible for the renewed increase in the privately held money supply included an increase of $11,300 million in loans of commercial and mutual savings banks and an increase of $1,900 million in holdings by such banks of state and local government obligations. These factors were offset in part by a decrease in holdings of U.S. government securities by the banking system amounting to $3,900 million, by a decrease during 1950 in the gold stock of $1,600 million and by other factors. Almost all the increase in the money supply came about in the second half of the year.

The year saw such large expansion in private bank credit that several new peaks were reached by Dec. 31, 1950, in earning assets of all commercial banks. Total loans and investments reached a new record of $127 million, an increase of $7,000 million during the year. Total loans of all commercial banks rose almost $10,000 million to a new peak of $52,700 million. Holdings of other securities reached a record level of $12,200 million, after an increase of $2,000 million. Holdings of U.S. government obligations by all commercial banks declined $4,700 million and stood at $62,300 million at the end of the year. On June 30, 1950, national banks, which numbered almost 5,000, held $82,400 million of total deposits. State banks, which numbered somewhat more than 9,000, had total deposits of $61,400 million.

An act of congress, approved on Sept. 21, 1950, increased the legal maximum of insurance for each depositor to $10,000 from the previous $5,000. A study by the Federal Deposit Insurance corporation, released early in the year, indicated that on Sept. 30, 1949, the 13,440 insured commercial banks reported 91 million accounts with total deposits of $139,000 million. About 88 million accounts, or 96% of the total number, were fully protected under the $5,000 maximum coverage per depositor, while the insured deposits amounted to $62,000 million or 45% of total deposits. The study showed that at Sept. 30, 1949, there were about 2,250,000 accounts of between $5,000 and $10,000, and that additional insured deposits with a coverage of $10,000 amounted to $10,600 million.

Consumer credit expansion played a very important role in business developments during the year. By Dec. 31, 1950, total consumer credit reached a record height of about $20,000 million, an increase of $3,200 million from the end of Dec. 1949. (*See* CONSUMER CREDIT.)

The decline in the U.S. gold stock, which had started after devaluation of the pound sterling and other currencies in Sept. 1949, continued at an intensified rate. At the end of Dec. 1950, the gold stock stood at $22,800 million, about $1,900 million less than the record of about $24,700 million reached just before devaluation of the pound. Most of the gold sold net by the U.S. to foreign countries was held and earmarked for the account of foreign monetary authorities at the Federal Reserve Bank of New York, where gold under earmark for the account of foreign central banks and international institutions amounted to more than $5,600 million on Dec. 29, 1950, as against $4,000 million on Sept. 30, 1949. The accelerated U.S. gold sales reflected in part a more rapid conversion into gold of dollar balances acquired by foreign nations, but chiefly the more rapid aquisition of dollars by foreign countries which resulted from the sharp increase in U.S. imports at very high prices after the outbreak of the war in Korea.

During 1950 as a whole the gross federal debt declined by about $400 million to $256,700 million on Dec. 31, 1950. Total marketable obligations were reduced by $2,700 million. The amount outstanding of treasury notes rose sharply and that of certificates of indebtedness and marketable bonds fell, reflecting the issue of notes for certificates and bonds in exchange operations. Non-marketable public issues outstanding continued to rise, with increases of $1,300 million in United States savings bonds of all series including accrued discount and $1,000 million in treasury savings notes.

Redemptions of series E savings bonds exceeded sales after May, however, and growing attention was being given to the problem of refunding the series E bonds when they would begin to mature in May 1951. Special issues, held by government trust funds and corporations, rose during the year by $700 million.

The volume of bank debits of the banks in 333 reporting centres reached another high level in 1950. The annual rate of turnover of demand deposits, except inter-bank and government, showed a substantial increase, from 27·3 in Oct. 1949 to 30·7 in Oct. 1950 for New York city banks, and from 18·5 in Oct. 1949 to 20·9 in Oct. 1950 for banks in other leading cities. The increase in the velocity of the circulation of the privately held money supply as well as the increase in the quantity of deposits and currency financed the post-Korea increase in money expenditures throughout the economy. (J. K. L.)

Mutual Savings Banks. For the year ended July 1, 1950, assets of the mutual savings banks in the United States increased by $1,181 million (5·6%) to a total of $22,293 million, and deposits increased by $991 million (5·2%) to a total of $19,939 million. In the year ended July 1, 1949, the increases were $849 million or 4·2% and $739 million or 4·1% respectively. On July 1, 1950, the combined surplus was $2,210 million, equivalent to 11·1% of deposits. On July 1, 1949, the combined surplus was $2,063 million or 10·9% of deposits. Accounts increased by 345,115 (1·8%) to a total of 19,531,373 at July 1, 1950 On Dec. 1, 1950, there were 529 mutual savings banks with 212 branches in operation. There was a decrease of 2 banks and an increase of 14 branches during 1950. The combined assets of all mutual savings banks on July 1, 1950, were invested as follows: U.S. government securities 51·91%; other securities 10·91%; mortgage loans 31·82%; cash and other assets 5·36%. On July 1, 1949, the investment classification was: U.S. government securities 55·22%; other securities 11·21%; mortgage loans 28·18%; cash and other assets 5·39%.

Savings Bank Life Insurance. At the end of Oct. 1950 there were 259 savings banks in the states of Connecticut, Massachusetts and New York selling savings bank life insurance; of these, 82 were issuing banks and 177 were agency banks. The amount of savings bank life insurance in force and number of policies represented were: Connecticut $14,015,028 in force, representing 14,772 policies; Massachusetts $392,869,673 in force, representing 423,345 policies; and New York $171,752,816 in force, representing 124,445 policies. Combined there was $578,637,517 in force, representing 562,562 policies. (*See* also BANK FOR INTERNATIONAL SETTLEMENTS; BANK OF ENGLAND; BANK OF FRANCE; BUSINESS REVIEW; EXPORT-IMPORT BANK OF WASHINGTON; FEDERAL RESERVE SYSTEM; INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT; INTERNATIONAL MONETARY FUND.) (HE. BR.)

BANK OF ENGLAND. Problems arising from the important changes in the external payments position of the United Kingdom after devaluation of the pound in 1949 held the main attention of the bank throughout 1950. As adviser to the Treasury on currency and the institution responsible for the administration of the country's exchange control machinery, the bank played a large part in formulating and implementing the decisions taken by the government to meet the situation created by the improvement in Great Britain's current account payments, by the substantial influx of "hot" money into the country in the second half of the year and by other developments. It was also active in the negotiations which led to full British participation in the European Payments union set up by the Organization for European Economic Co-operation.

Steps taken by the bank in connection with the decision to promote the wider use of sterling as an international currency included the partial relaxation of restrictions on the transfer of sterling securities between non-residents of the sterling area and the extension of an offer to countries inside the O.E.E.C. group to become full members of the sterling transferable account system.

Movements in the bank's note circulation were on a slightly larger scale than in the previous year. But inflationary pressure in Britain having developed less rapidly than had been feared at the time of the devaluation of the pound, there was no marked change in the basic financial position of the bank. To meet the seasonal demand the total of notes in issue was raised in the summer by £50 million by increasing the fiduciary issue. Contrary to the usual practice, this was not reversed at the end of the holiday season. Early in the year the bank announced its intention to return to the prewar practice of holding its main reserve of subsidiary coinage on the issue department. Owing to the inability of the British and U.S. governments to agree upon the use to which Marshall aid counterpart funds should be put there was a considerable immobilization of money in the special account maintained by the bank to receive these funds until late in the year.

The main items in the bank returns in October, with comparisons for 1949 and 1948 are given in the table.

BANK OF ENGLAND

	Oct. 27, 1948 (£ million)	Oct. 26, 1949 (£ million)	Oct. 25, 1950 (£ million)
Issue Department			
Notes in circulation	1,231	1,259	1,273
Fiduciary issue	1,300	1,300	1,350
Banking Department			
Public deposits	13	17	13
Treasury special account	20	63	266
Bankers' deposits	307	298	315
Other deposits	93	107	89
Government securities	322	403	556
Other securities	37	27	67
Reserve of notes and coin	72	47	80

The bank published a survey of United Kingdom overseas investment during 1938-48. (C. H. G. T.)

BANK OF FRANCE. The restriction of credit, enforced since the close of 1948 to implement the government's anti-inflation policy, was to some extent relaxed in the early part of 1950. To help to check the decline in business activity the discount rate was reduced and steps taken to encourage the commercial banks to grant more generous credit facilities to private enterprises.

The rise in French prices, partly owing to developments in world commodity markets and partly to the inability of the government to eliminate the budget deficit, brought increased demand for currency. This, in conjunction with an increase in note hoarding, produced a considerable rise in the note circulation. An agreement concluded with the Treasury for the revaluation of the bank's gold stock (previously valued on the 1945 gold value of the franc) to take account of the postwar series of devaluations was implemented in August. The book profit on the transaction of Fr.126,000 million was used to redeem French Treasury bills held by the bank, to reimburse a dollar loan obtained by the government in the U.S. in 1947 and to increase the state's autonomous redemption fund.

In the same month the bank agreed to participate in arrangements whereby the franc proceeds of two new dollar loans secured by the French Treasury from U.S. banks would be used to ease the government's internal financing problem. The bank furnished the exchange stabilization fund at intervals during the year with considerable additional quantities of francs to finance purchases of gold and foreign exchange. The increase in lending to the state on this account largely

neutralized the contraction in the bank's advances to the government produced by the gold revaluation operation.

BANK OF FRANCE

	Sept. 30, 1948 (Fr. million)	Sept. 29, 1949 (Fr. million)	Sept. 28, 1950 (Fr. million)
Assets			
Gold	65,200	65,200	182,875
Private discounts and advances	257,800	442,400	415,837
Advances to state	711,700	715,200	717,042
Liabilities			
Notes	910,600	1,210,600	1,467,425
Government deposits	800	200	94
Other deposits	191,300	138,800	156,837

The bank introduced notes with denominations of Fr. 5,000 and Fr. 10,000 in July. Previously the largest note in circulation was valued at Fr. 1,000, an earlier issue of Fr. 5,000 notes having been withdrawn at the beginning of 1948. Early in the year the form of the bank's weekly return was changed to provide more detailed information about the composition of the bill portfolio and the ownership of creditor accounts. (C. H. G. T.)

BAPTIST CHURCH. The major event for world Baptists in 1950 was the eighth congress of the Baptist World alliance at Cleveland, Ohio, during July. The registration of 45,000 from 48 nations was exceeded only by the 57,000 who had attended the sixth congress, Atlanta, Georgia, in 1939. Representing 18 million Baptists throughout the world, the congress demanded freedom of peoples everywher , and, under the conviction that all nations are guilty under God for war, called for the practice of religious good will and co-operation as the only assurance of peace. F. Townley Lord of London, England, succeeded C. Oscar Johnson, St. Louis, Missouri, as president.

The Australian Baptists faced serious missionary handicaps resulting from the devaluation of the pound. After Youth month in July, Australian Baptists announced that youth responds to adequate leadership, respects self-evident authority and prefers to choose its own allegiance. Educational films emphasized Christian home life and churches held father-and-son and mother-and-daughter banquets.

The assembly of the Baptist Union of South Africa, in September, resolved to establish a Baptist theological college in 1951 at Johannesburg to enjoy facilities of the University of the Witwatersrand. The union reported 24,391 members; 700 baptisms in the European churches, 125 in the non-European and 1,168 in the Bantu.

The Baptist Missionary society, reporting on the progress of work in Ceylon, announced that the enrolment at Carey Boys' college, Colombo, had increased during 1945-50 from 300 to 1,000, and that the girls' schools such as those in Colombo, Matale and Ratnapura, had increased similarly in numbers. Protestant bodies discussed closer union in the island. The Baptist Missionary society of London also announced that the officers and staff of Whitewright institute, established in China in 1910, were all Chinese in 1950. During the year 30,500 people heard the gospel there.

The Foreign Mission board of the Southern Baptist convention opened a theological seminary in Zürich, Switzerland, with 30 students from 16 nations. All the trustees were European Baptists. The faculty was international—the president Scandinavian, the professors Swiss, British and American. Sixty ministers and students attended the European Baptist Ministers conference at the seminary in June.

The Southern Baptist convention met in Chicago with a registration of 8,151 messengers from a membership of 6,761,265. The Northern Baptist convention, meeting at Boston, changed its name to the American Baptist convention. The registration of 12,182 at the convention broke all records. A membership of 1,561,073 was reported.

An extract from an address on personal freedom, printed in the *Baptist Times*, London, which called attention to the existence of police state conditions in the U.S.S.R. and elsewhere, drew a reply from the All-Union Council of Evangelical Christian Baptists in Russia denying the imputation. (R. E. E. H.)

BARBADOS. British colony, the most easterly of the Caribbean islands. Area: 166 sq.mi. Pop.: (1946 census): 192,841; (1950 est.) 202,669. Language: English. Religion: Christian (*c.* 70% Anglican). Capital and chief port, Bridgetown (pop., 1948, 13,345). Administration: governor; executive council, 2 *ex officio* members and nominated members; executive committee, which introduces all money votes and initiates all government measures, consists of the members of the executive council *ex officio*, and 1 member of the Legislative Council and 4 from the House of Assembly appointed by the governor; legislature consisting of the Legislative Council, not more than 15 members appointed by the King, and the House of Assembly, 24 elected members. Governor, Alfred William Lungley Savage.

History. The most important pieces of legislation passed during 1950 were probably the Adult Suffrage act, giving the franchise to men and women over 21 years of age without any property qualifications, and the Petroleum act, granting a prospecting license to the Gulf Oil company. The latter act renewed possibilities which had been debated for many years of establishing another major industry in the island besides the cultivation of sugar on which the economy of Barbados had largely depended for three centuries.

Long known as a winter resort, Barbados witnessed during the year a considerable development in the summer tourist trade, the majority of the visitors being Venezuelans. The increased popularity of the colony for tourists at all times of the year was underlined by the beginning of operations by the Trans Canada airlines, which started regular scheduled flights from Montreal. To accommodate these and other long-distance planes a new runway 6,000 ft. in length was put into use at Seawell airport.

Barbados is a country of expert cricketers and fervent followers of the game. John Goddard, the captain of the victorious West Indian team which toured Great Britain in the summer of 1950, is a Barbadian, and there were five other Barbadians in the team. When the ship bearing the captain and other returning members of the team reached Barbados, a public holiday was declared; and the victors were officially welcomed by the governor.

Finance and Trade. Currency: West Indian dollar ($4·80=£1). Budget (1949-50): revenue $12,150,990; expenditure $12,095,842. Foreign trade (1949): imports $33,948,619; exports $22,341,775. Principal exports: sugar, molasses and rum. (P. H.-M.)

BARLEY: *see* GRAIN CROPS.

BASEBALL. Connie Mack, for 50 years manager of the Philadelphia Athletics, retired on Oct. 18, 1950, in his 88th year. He had been associated with the game since 1884.

In the top player deal of the year, the New York Yankees sent pitchers Duane Pillette and Don Johnson, second baseman George (Snuffy) Stirnweiss, outfielder Jimmy Delsing and $50,000 to the St. Louis Browns for pitchers Tom Ferrick and Joe Ostrowski and the assignment of two St. Louis players to New York's farm club at Kansas City, Missouri. The Giants claimed pitcher Jim Hearn from the Cardinals on waivers in mid-season and the right-hander, who had a 0—1 hill record with the St. Louis club, went on to post an 11—4 mark for the campaign. Late in June the Yankees recalled pitcher Edward (Whitey) Ford and he hung up nine victories against only one defeat to highlight the Bombers' drive towards the American league championship.

The major leagues' only no-hit game of the season was registered on Aug. 11 by Vern Bickford, Boston Braves' right-hander, who set down the Dodgers, 7 to 0.

Major League Races. After a 35-yr. lapse, the Phillies captured the second National league pennant in their history with a dramatic, last-day victory over the Brooklyn Dodgers. Entering the final day of the season, the Phils held a one-game margin and were faced with the prospects of a three-game play-off for the title if Brooklyn should win the concluding game, thereby throwing the race into a tie. With Robin Roberts hurling a five-hitter, however, and Dick Sisler providing the pay-off blow with a three-run homer, the Phillies posted a ten-inning, 4-to-1 triumph to win their first pennant since 1915.

The Yankees nailed down their 17th American league championship on Sept. 29, backing into the title when the runner-up Tigers lost to Cleveland, thereby erasing their last mathematical chance for the flag.

Individual Performances. Billy Goodman, Red Sox, ousted George Kell of Detroit as the American league batting champion with an average of ·354. Stan Musial of St. Louis captured the National league honours with ·346. Ralph Kiner retained his major league home run crown, clouting 47 round-trippers for the Pirates. Al Rosen, rookie Cleveland third baseman, led the American league with 37 homers.

All-Star Game. Albert (Red) Schoendienst, St. Louis Cardinal second baseman, clouted a home run in the 14th inning to enable the National league stars to defeat the American league representatives, 4 to 3, in the mid-summer classic at Comiskey park in Chicago on July 11.

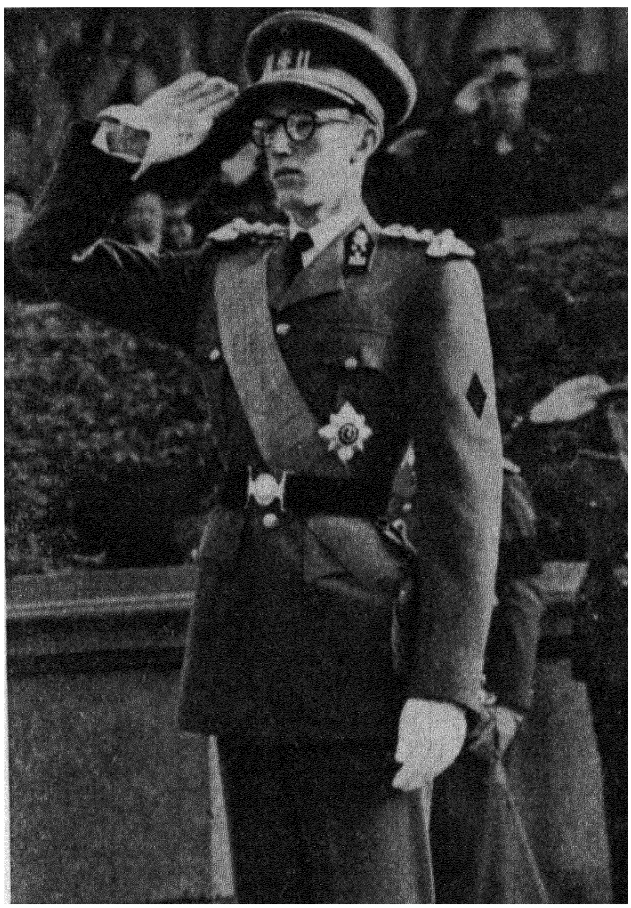
World Series. In the lowest scoring series in history, the Yankees defeated the Phillies in four straight games to register their 13th world championship and mark their sixth win in the minimum number of contests.

Attendance. Major league turnstile figures declined from 20,215,365 in 1949 to 17,462,977 in 1950. (L. RB.)

BASUTOLAND: *see* BRITISH SOUTH AFRICAN PROTECTORATES.

BAUDOUIN (BAUDOUIN-ALBERT-CHARLES-LEOPOLD-AXEL-MARIE-GUSTAVE, DUKE OF BRABANT), Prince Royal of Belgium (b. Stuyvenberg castle, near Brussels, Sept. 7, 1930), elder son of King Leopold III (*q.v.*) and Queen Astrid. Just before he was five he lost his mother in a motor accident and was almost ten when Belgium was invaded by the Germans. With his elder sister Princess Josephine-Charlotte and his younger brother Prince Albert he was sent in May 1940 to Cahors, France; in June he reached Lisbon, but at the end of July he rejoined his father at Laeken palace where the royal family remained in seclusion. He accompanied his father during his internment in Germany (June 1944—May 1945) and his subsequent voluntary exile in Switzerland. He was for the most part privately educated but during his father's stay at Pregny, near Geneva (1945-50), he attended a state college at Geneva. On Aug. 11, 1950, by a joint session of the Senate and the Chamber of Representatives, he was informed that parliament had granted him power to exercise the royal prerogatives, to which he answered in French and Flemish, "I accede to the wish of parliament." He took the oath to observe the constitution and the law. By the terms of his father's abdication he was to ascend the throne on Sept. 7, 1951.

BAYAR, CELÂL, Turkish statesman (b. Umurbey, near Bursa, May 15, 1884), the son of a Turkish immigrant from Bulgaria. To his father's advanced views he owed the unusual opportunity of education at a French school at Bursa. Later, imbued with the western outlook, he entered



Prince Baudouin, the Prince Royal, saluting after placing a wreath on the tomb of the unknown warrior in Brussels, Nov. 1950.

the Deutsche Orient Bank, a field which had hitherto been reserved to foreigners or Turkish subjects belonging to national minorities. After the Young Turk revolution in 1908 he became secretary of the Committee of Union and Progress in Izmir, in which capacity he worked hard for Turkish nationalism. In the revolution of Kemal Atatürk and the war against the Greek invasion he took an active part, placing himself at the head of the resistance movement. Disguised as an itinerant teacher, he toured the country co-ordinating activities. From Feb. 27, 1921, to Jan. 15, 1922, he was minister of national economy for the first time. On March 6, 1924, he was appointed minister for exchange and rehabilitation of refugees. He resigned on July 7 of the same year to become head of the newly founded Iş (Business) bank. On Sept. 9, 1932, he returned to the government as minister of national economy for the second time, became acting prime minister on Sept. 20, 1937, and succeeded Ismet Inönü as prime minister on Oct. 25 of the same year. Following the death of Atatürk (Nov. 1938) and the election of Inönü as second president of the republic, Bayar resigned on Jan. 25, 1939. Re-elected deputy, he became the leader of a minority within the Republican People's party who warned their colleagues against the dangers of a one-party system. In June 1945 he resigned from the R.P.P. and on Jan. 7, 1946, formed the Democratic party, which was permitted to win 62 seats in the elections on July 21, 1946, and which under his leadership secured an overwhelming victory in the elections of May 14, 1950. He was elected third president of the Turkish republic by the new parliament by 387 votes against 64 for Inönü.

BECHUANALAND: *see* BRITISH SOUTH AFRICAN PROTECTORATES.

BEEKEEPING. Speaking generally, 1950 was a disappointing year to British beekeepers. The large acreage of land under the plough limited the foraging grounds to such an extent that perfect climatic conditions were necessary for real success. This proved far from realization.

During the period of fruit blossom the weather was never ideal, and, just as at the time of later nectar flows, the nights were too cold for generous nectar secretion. A few apiarists were fortunate, however, and received encouragement by fair returns for their labour; but there is little doubt that the average yield from each colony fell well below 20 lb. The quality of honey was much inferior to that which prevailed in the previous year. Light-coloured honey was not nearly so common as in an average season. More often it was medium to dark, and sometimes spoilt by honey dew. The density of most honeys was low, though sometimes with flavour and aroma of distinction.

Poverty in the brood chambers was more marked than usual, consequently the allowance of sugar for winter feeding was insufficient, and fear was expressed that many colonies would not survive the winter.

In some areas as often happens in a poor season, swarming became annoyingly excessive. On the removal of surplus many colonies were found to be either queenless, headed by drone-breeder queens, or hampered by the presence of fertile workers. In the latter situation beekeepers found re-queening difficult and many good young queens were lost.

Beekeepers fortunately situated near ling-growing moors had high hopes of compensation from them, but again the weather was not too helpful and returns from the heather were meagre.

Disease made its usual appearances in various parts of the country. A few districts suffered rather heavily, in some cases due to the ignorance of the beginner, but far too frequently the result of sheer carelessness on the part of beekeepers of some experience. Experts insisted that neither American nor European Foul Brood yielded to any treatment but the destruction by fire of every comb, quilt, etc.. that had been in contact with a diseased colony. This should be followed by heavy disinfection of all hive parts with a strong solution of carbolic acid. A high percentage of colonies were again infested with the mites responsible for Acarine disease and teachers of apiculture again urged the timely use of the Frow remedy or oil of wintergreen. (W. H. R.)

BEER: *see* BREWING AND BEER.

BELGIAN COLONIAL EMPIRE. The Belgian colonial empire consists of the colony of the Congo in central Africa and the adjacent trust territories of Ruanda and Urundi. The accompanying table gives material relative to all territories administered by Belgium. Total area: about 925,094 sq.mi. Total pop. (1949 est.): about 14,352,200. Chief towns (white population only, Dec. 1948 est.): Léopoldville (cap., 7,244); Elisabethville (6,240); Stanleyville (1,517); Costermanville (1,511).

History. The 10-year plan for the Congo's economic and social development published in 1949 naturally formed the starting point for 1950. Pierre Wigny, minister for the colonies, obtained approval for his schemes from the Belgian cabinet in February and visited London and Paris to obtain informal co-ordination from two governments with neighbouring colonial interests. Eugène Jungers, governor general of the Congo, expounded aspects of the programme to the annual meeting of the Congo government council at Léopoldville (July 17-22).

Two important steps to raise Native standards were the opening of the first all-Native co-operatives of many types (planters, fishermen, artisans, etc.) under government supervision and the creation of a savings bank in which Natives were for the first time allowed to deposit both personal and corporate funds. A decree was passed prohibiting polygamy after the end of 1950.

Representations by the principal organization of white settlers (U.C.O.L.), asking for the exclusion of Natives from the nominated and consultative government council, were rebuffed by Jungers. Proposals to create a Congo Legislative Council, with powers comparable to those of the Belgian parliament, he referred to the government council, which rejected them. The government council, however, asked that it should be compulsory for the government to submit proposed decrees of importance to the council or its standing committee and to justify before its members any failure to introduce such legislation as the council might twice request. At the same time the council reaffirmed the governor general's duty to issue urgent decrees on his own responsibility.

Under the 10-year plan the colony's 44,000 European population required to be doubled. A propaganda campaign was opened in Belgium to attract professional skill to the Congo, especially engineers, agricultural technicians and doctors. Plans were approved for a new airport 20 km. east of Léopoldville, and arrangements made for the Belgian air force to do much of its training in the Congo. Additional hydro-electric plants were erected, chiefly in the Katanga

BELGIAN COLONIAL EMPIRE

Country and Area (in sq.mi.)	*Population* (Feb. 28, 1949 est.)	*Capital, Status and Governor*	*Principal Products* (1949) (including Ruanda and Urundi)	*Foreign Trade* (Francs† million) (including Ruanda and Urundi)	*Road, Rail and Waterways* (including Ruanda and Urundi)	*Budget* (Francs† '000)
BELGIAN CONGO 904,974	Native 10,914,208 White 51,639* (including 36,510 Belgians)	Léopoldville; colony; governor general: Eugène Jungers	Diamonds (carats) 9,884,000 Gold (kg.) 10,383 (metric tons) Silver 141 Copper (metal) 141,399 Tin (metal) 13,365 Cobalt 1,976 Manganese ore 12,247 Tungsten 169 Cadmium 25 Zinc (concentrates) 109,263 Coal 152,370 Palm oil 121,226 Palm kernels 80,034 Gum copal 10,721 Cotton 46,806 Coffee 31,434 Maize 17,271 Timber 71,359	1949 Imports 10,346 (931,500 metric tons) Exports 11,155 (836,700 metric tons) 1950 (six months) Imports 4,574 (438,000 metric tons) Exports 5,845 (407,800 metric tons)	Roads (1949): 116,303 km. Railways (1948): 4,747 km. Waterways (1948): 25,412 km. (including 12,284 km. for barges of 40 tons only) Motor vehicles (excluding Ruanda and Urundi Dec. 1949): Cars. 8,000 Commercial vehicles 12,000	Belgian Congo (1949) Revenue 4,562,602 Expenditure 4,460,764 (1950 est.) Revenue 4,032,220 Expenditure 4,008,982 *Index number of the cost of living* (July 1935=100) (July 1950=258)
RUANDA AND URUNDI 20,120	(1948 est.) Native 3,386,362	Nianza (Ruanda) Kitega (Urundi) trust territory administered with Congo				Ruandi-Urundi (1949 actual) Revenue 232,062 Expenditure 347,504 (1950 est.) Revenue 276,919 Expenditure 225,164

* Including Ruanda and Urundi. † Although the Congolese franc was technically an independent currency it was equal to the Belgian franc and in Sept. 1949 was equally devalued by 12·34% to the U.S. dollar.



Youngsters of the Belgian Congo carrying light-weight models which they have made of river steamers.

province and the neighbourhood of Stanleyville. In both these areas there was an extension of private building; elsewhere postwar construction had roughly caught up with the housing shortage. Public works absorbed the increased cement output. Work went forward in the construction of a military base at Kamina in the Lualaba province, west of Katanga.

Among many new commercial ventures were the first margarine factory and the equipment of silk-spinning plant. The largest trade exhibition ever held in the Congo, with 250 Belgian and 100 other exhibitors, took place in July at Elisabethville. Navigation on the upper Congo was handicapped by the abnormal growth of papyrus on Lake Kisale, for a time delaying transport from Katanga.

In October a 4% Congo loan of 60 million Swiss francs, to be repaid in ten annual instalments from the end of 1959, was floated. Other financial developments included the raising of the official rate for "free" gold sales from the Congo from 64,000 to 66,000 Belgian francs a kilogram. A number of Natives in the Kivu province and Ruanda-Urundi were arrested on a charge of illicitly extracting and exporting alluvial gold.

The activities of a Czech sculptor making terracotta heads and busts revived macabre rumours that meat-tins trademarked with a negro's head were filled with kidnapped Natives. A large-scale riot at Léopoldville in June resulted.

Ruanda-Urundi. In February the U.N. Trusteeship council approved the administration of this territory, but recommended steps to abolish flogging. They rejected the claim of Mwambutsa, mwami (king) of Urundi, to the legal sovereignty of 60,000 inhabitants of the Bugufi district of Tanganyika. Accompanied by his brother and three other chiefs, Mwambutsa visited Belgium in July (as the mwami of Ruanda had done the year before). He was received by the regent and subsequently by King Leopold and Queen Elisabeth. His tour outside Brussels included Antwerp, Ghent and Namur.

Education. Belgian Congo (Jan. 1949): European schools 44, pupils 6,470; Native schools 26,293, pupils 878,972. Ruanda-Urandi (Jan. 1949): state schools 2, pupils 1,240, Native teachers 21; Roman Catholic schools 3,549, pupils 289,835, Native teachers 4,749; Protestant schools 437, pupils 34,322, Native teachers 638. (H. D. Z.)

BELGIUM. Kingdom in western Europe bounded S.W. by France, N. by the Netherlands and E. by Germany and Luxembourg. Area (incl. some German frontier localities annexed on April 15, 1949) 11,782·5 sq.mi. Pop.: (1947 census) 8,512,195; (1948 est.) 8,602,611. Language (1930): Flemish (Dutch) 42·92%, French 37·56%, German 0·85%, Dutch and French 12·92%, German and French 0·83%. Religion: mainly Roman Catholic; Jewish 35,000. Chief towns (pop., 1948 est.; first figure including suburbs, second figure *commune* only): Brussels (*q.v.*, cap., 1,296,687, 185,112); Antwerp (chief port, 794,280, 266,636); Liége (573,176, 156,664); Charleroi (445,229, 26,262); Ghent (442,792, 166,797); Namur (215,069, 31,637); Bruges (200,850, 52,984). Ruler, King Leopold III (*q.v.*); regents in 1950, Prince Charles and (from Aug. 11) Prince Baudouin (*q.v.*); prime ministers in 1950, Gaston Eyskens, Jean Duvieusart (*q.v.*, from June 8) and Joseph Pholien (*q.v.*, from Aug. 15).

History. Belgian politics in 1950 were wholly dominated by the royal question. The bill, already passed by the Senate, to authorize a referendum on the desirability of King Leopold's resuming his prerogatives was debated in the Chamber of Representatives throughout January and finally passed (117 votes to 92) on Feb. 8. The referendum, at which voting was compulsory, was to be purely advisory. The king had indicated beforehand that if he received less than 55% of the votes cast he would withdraw in Prince Baudouin's favour. The Socialists, with some Liberal support, maintained that only a Leopoldist vote of 66% or 70% in the country as a whole, with at least a bare majority in each of the three regions—Flanders, French-speaking Wallonia and Brussels—would justify his return.

After a vigorous campaign of posters, leaflets and wall-slogans the referendum passed off quietly on March 12. It showed a 57·68% majority for the king (2,933,745 against 2,151,099). But whereas Flanders produced a 72% Leopoldist result, the Walloon vote was 57·8% hostile and Brussels polled 51·8% against the king. Summoning the Social Christian (Catholic) premier, Gaston Eyskens, and the presidents of the two houses of parliament to his home at Pregny, near Geneva, King Leopold issued a statement showing that while he would not take action in advance of parliament's verdict, he himself interpreted the results as a signal for his recall.

The Social Christian majority of the government was now anxious to summon a joint session of the two houses to end the regency. The Liberals, however, withdrew their eight representatives from the two-party cabinet, which resigned on March 18. The Socialists gave notice that they would oppose the king's return by every means, including a general strike. A series of 24-hr. "spontaneous warning strikes" was already occurring in the mining areas of Wallonia, and a similar protest strike of a day paralysed the Antwerp docks on March 20.

Two days later the 81-year-old Count Henri Carton de Wiart, a former Catholic premier, was instructed by the regent to explore the possibilities of a new government. He called on March 23, for the first time since 1914, a meeting of ministers of state (privy councillors), but made no progress towards reconstructing the coalition. He gave up the attempt next day. Already fresh strikes were occurring in Wallonia and Brussels. The regent caused general surprise by asking Albert Devèze, the outgoing Liberal vice premier and minister of defence, to form a cabinet. After a week's attempts to bring about a "solution of concord" and a chilly interview with King Leopold, Devèze on April 4 desisted.

Paul van Zeeland, the outgoing Social Christian foreign minister and former premier, was now called in. By April 7 he claimed to have formed his government, but difficulties occurred with the moderates of his own party. The regent

refused to approve his suggested cabinet list on April 12, and it was understood that King Leopold himself doubted at this stage the wisdom of recovering the throne as the nominee of a single party. Van Zeeland and the king's secretary, Jacques Pirenne, went to Geneva to see King Leopold, who (by a recording made in Switzerland) broadcast to his people on April 15 for the first time since 1940. His message contained a suggestion, previously mooted both by Liberals and by Socialists, that he might return to the throne but " delegate the exercise of his powers temporarily " to his 19-year-old heir.



The three prime ministers of Belgium in 1950. Left to right, Gaston Eyskens, Jean Duvieusart and Joseph Pholien.

At the suggestion of Paul-Henri Spaak, the Socialist ex-premier, three-party talks were held to discuss hov this offer, criticized by the extremer Leopoldists, might be implemented. The opposition's misgivings lest the king should ultimately resume his original powers from Prince Baudouin were increased when a further visit of van Zeeland to Geneva produced a refusal from the king to leave Belgium after transferring his prerogatives. The Socialists withdrew from the negotiations, and after fresh friction with the Liberals Eyskens and van Zeeland jointly persuaded the regent to grant a dissolution.

Elections were held on June 4. By now Belgium had passed 11 weeks under a caretaker administration. Parliament had not met since March 7. No budget had been passed. The final stage of Benelux was still held up, as well as the ratification of the European payments agreement. Even international defence decisions affecting Western Union and the North Atlantic treaty remained tentative while Belgian attention was concentrated upon the domestic royal question. The electoral contest, with this as the main issue, was lukewarm, all parties having virtually exhausted their funds and their arguments.

The Social Christians gaining 47·68% of the votes (just 10% below the Leopoldists' results in the referendum), returned with 108 out of 212 seats in the Chamber—the first clear parliamentary majority since 1914. The Socialists had 77 seats, Liberals 20, Communists 7. Jean Duvieusart, 50-year-old minister for economic affairs in the Eyskens government, formed a new all-Catholic cabinet of eight Flemings and seven Walloons. Duvieusart visited King Leopold and, having announced his intention of calling a joint session of the two houses to repeal the Regency law, obtained a vote of confidence from each house separately.

The joint session began formally on July 6, but the real debate did not start till July 12. Noisy Socialist obstruction protracted the joint session. But on July 20, the bill ending the regency passed by 198 votes to none, the Socialists, Communists and almost all the Liberals having walked out. In the early morning two days later—time and place being kept secret—King Leopold, Prince Baudouin and Prince Albert landed at Évère military airport and drove straight out to Laeken palace. The route was closely guarded by armed gendarmerie and troops.

A few hours later King Leopold broadcast to the nation, sent messages to parliament, confirmed the Duvieusart cabinet in office and summoned to a Crown council the minister of state. Count Hubert Pierlot, the wartime Catholic premier, declined to attend. The Socialists had already resigned their honours. The Liberals left without meeting the king, and their executive issued a statement refusing political co-operation with him and urging his " voluntary and honourable abdication." On the other hand, an immense quantity of flowers, chiefly from Flemish supporters of the king, began to arrive at the palace—contrasting with turbulent counter-demonstrations in Brussels in which Spaak and other Socialist leaders were prominent.

A campaign of sabotage by explosives, chiefly directed against railway and telephone lines, and widespread strikes in Wallonia, no longer confined to 24 hours, were described by Spaak in the Chamber as " having the character of an insurrection, though they might be the beginning of a revolution." The flag of Walloon separatism was raised in Liége, Charleroi and elsewhere, and within a week 500,000 men were on strike, including dockers and ship repairers in Antwerp and textile operatives in Ghent. In Brussels almost all trams and taxis were forced off the streets, cafés were shut and a small crowd of hooligans with stink-bombs, firecrackers and anti-Leopold whistles compelled the larger stores to close. Six persons, including a Socialist senator, were injured in street fighting.

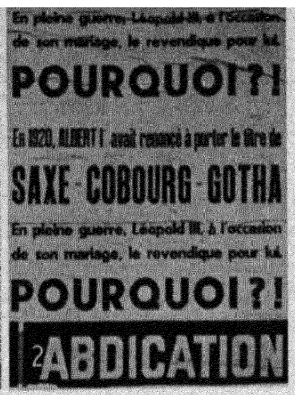
Sabotage blocked most railway lines and some main roads. In Liége, where a demonstrator had lost his foot, the city was hung with black flags and a state of emergency proclaimed. Gas was cut off here and water was only intermittent; food shops alone were kept open for two hours a day. On July 30, gendarmes breaking up a prohibited meeting at Grâce-Berleur on the outskirts of Liége, fired and killed three men. Max Buset, the Socialist party chairman, declared that unless decisive steps were taken, there might be civil war the following day. In defiance of the government preparations had already been made for a " march on Brussels " on Aug. 1, by 100,000 persons from the Walloon mines and factories.

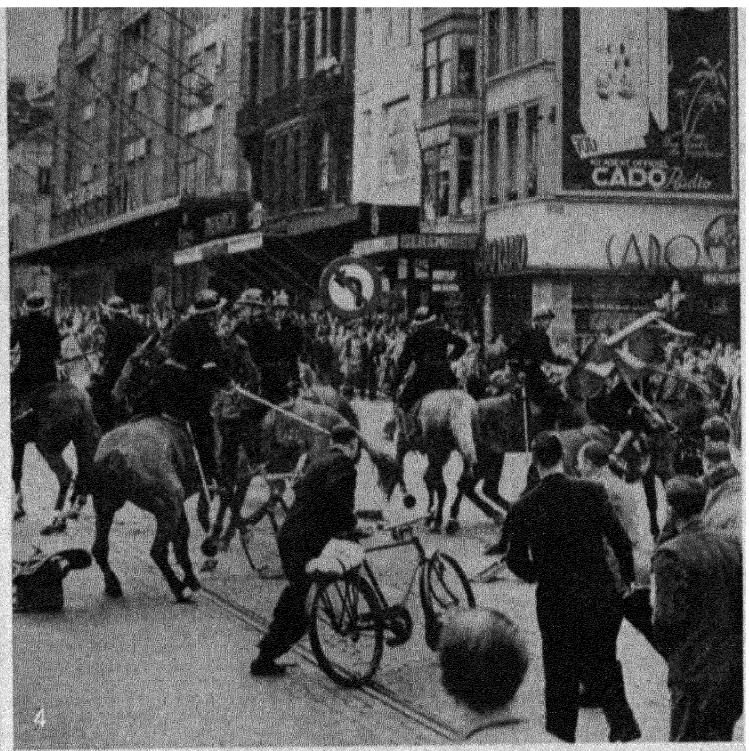
The cabinet sat almost continuously through the night of July 30-31. By 8 P.M. an agreement in principle had been reached between the party leaders, the government and the king's representative. The prime minister was to broadcast the actual text two hours later. Its basis was that the king should hand over his powers to Prince Baudouin at once and abdicate on the prince's 21st birthday, Sept. 7, 1951. He was not, however, obliged to return into exile. King Leopold now revived an already rejected condition that he might at his own discretion resume full powers from Prince Baudouin. The broadcast was cancelled, and it was not until 6.30 A.M. on Aug. 1 that the king was persuaded to accept the solution agreed the previous day. In a subsequent open letter to the prime minister he made it clear that he yielded only to the threat of being left without a government at all.

Socialists and Liberals had now to call off the march on Brussels and damp down Communist agitation for a republic. Edgar Lalmand, the Communist party secretary, and another Communist deputy were temporarily arrested for organizing a prohibited public meeting. More serious were the reactions of the extreme Leopoldists, who felt themselves betrayed by the moderates of the Catholic party, some of whose homes were attacked with small bombs. Baron van der Straten-Waillet, the party chairman, after a series of stormy party meetings, resigned his position. It was now the turn of the Leopoldists to demonstrate in Brussels, and of Catholic Flanders, not free-thinking Wallonia, to talk of separatism.

The bill transferring powers to Prince Baudouin provoked some fresh parliamentary scenes, but passed both houses in turn (160 votes to 127 and 121 to 22). On Aug. 11 a joint morning session of the two houses, interrupted by a smoke-bomb

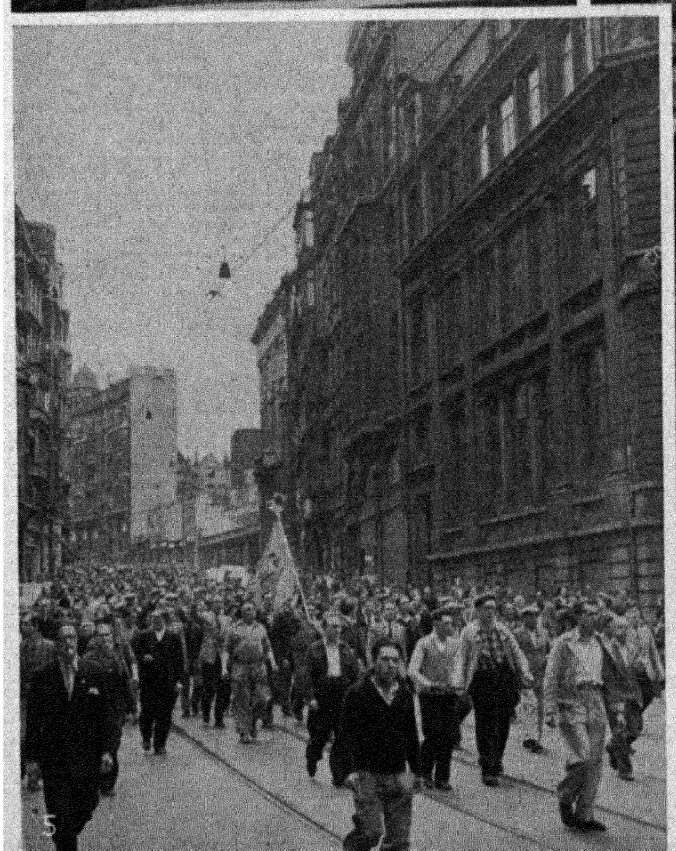












Scenes from Belgium's eventful 1950. Posters exhibited before the referendum on March 12 (1-2). King Leopold (3) at Evère airport, Brussels, on July 22, when he returned to Belgium. His return was followed by disturbances in Brussels (4) and by a march on the capital (5). He handed over his royal prerogatives, and on Aug. 11 his elder son, Prince Baudouin, was sworn in as Prince Royal (6).

thrown by a Leopoldist army officer, resolved that the royal prerogative should henceforth be exercised by the prince royal—Baudouin. The same afternoon he took the oath before the two houses and the principal notables of the realm. A Communist, Julien Lahaut, the party chairman, interrupted the ceremony with a cry of *Vive la République!* (a week later he was shot dead at his home in Seraing by two unidentified men).

Prince Baudouin's first political act was to ask van Zeeland, the strongest Leopoldist in the previous cabinet, to form a new government. This he did on Aug. 15, but opposition of the moderates forced van Zeeland, while remaining foreign minister, to yield the premiership to Joseph Pholien, a 66-year-old Catholic senator. Except for a new non-political minister of defence, Colonel Édouard De Greef, the government was composed, like its predecessor, entirely of members of the Social Christian party, but all the senior ministers of the late cabinet, apart from van Zeeland, were eliminated. The Chamber and Senate passed a vote of confidence in the new government (107 to 78 and 82 to 61) before going into recess.

Defence. When Parliament resumed, Colonel De Greef introduced on Nov. 7, in face of Socialist opposition, a bill calling up conscripts for two years at the age of 19, instead of for one year at 20. This confirmed pledges given by Pholien in his first weeks of office, when he also undertook to organize reserve divisions, train a home guard against airborne attacks and establish a special force of frontier guards. Earlier in the year it had been announced that the Belgian navy was to be trebled and the air force expanded. A battalion of 1,000 volunteers was enrolled for service in Korea.

Industry and Unemployment. Unemployment in the last week of January reached a figure of nearly 340,000 (including 120,000 temporarily out of work), but this was reduced in April by a pick-up in the textile industry, favoured by the removal of Dutch import restrictions, and again in June by an improvement in agriculture and building. Retail trade was assisted by panic buying of foodstuffs in the summer, prompted by war rumours following the invasion of Korea. By September, when a 6-week dock strike was brought to an end, unemployment was down to 172,000, and industrial activity stood at a level of 133·1 (1936-38 = 100). Steel output, which had been cut back for some months, went ahead with world re-stocking in view of rearmament, and a government policy of investment in roads, airport installations and other public works came into play.

(H. D. Z.)

Education. (1948-49) Elementary: infant schools 4,064, pupils 272,264; primary schools 8,735, pupils 770,822; adult schools 356. Secondary, state: lower-grade (*athénées*) 117, pupils 53,272; higher grade (*écoles moyennes*) 140, pupils 39,362; "free" (Catholic) schools 458, pupils (1946) 65,918. Teachers' colleges: infant 39, students 1,223; elementary 81, students 8,460; secondary 41, students 841. Universities 4, students 16,723.

Agriculture and Fisheries. Main crops ('000 metric tons, 1949; 1950 est. in brackets): wheat 596 (590); barley 247; oats 587; rye 258 (250); potatoes 2,047; sugar, raw value 344. Livestock ('000 head, Jan. 1950): cattle 2,761, of which cows in milk 859; sheep 121; pigs 1,361; horses 257; goats 51; poultry 18,000. Meat production ('000 metric tons, 1948; 1949 in brackets): total 187 (260), of which beef and veal 103 (122), pork 82 (136). Fisheries: total catch ('000 metric tons, 1948; 1949 in brackets) 70·9 (68·3).

Industry. Industrial establishments (Jan. 1948): 248,128; persons employed 1,000,010. Fuel and power (1949; 1950, six months in brackets): coal ('000 metric tons) 27,852 (14,179); manufactured gas (million cubic metres) 1,632 (729·6); electricity (million kwh.) 8,160 (4,002). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): pig iron 3,744 (1,756); steel ingots and castings 3,840 (1,767); copper smelter 133 (65); zinc 177 (84); lead 79 (37); tin 9·1 (5·5); aluminium 2·3 (1·1). Manufactured goods ('000 metric tons, 1949; 1950, six months, in brackets): cement 2,928 (1,501); woven cotton fabrics 60 (30); cotton yarn 84 (45); wool yarn 36 (19); rayon cloth 5 (3); paper 264·6 (145·1).

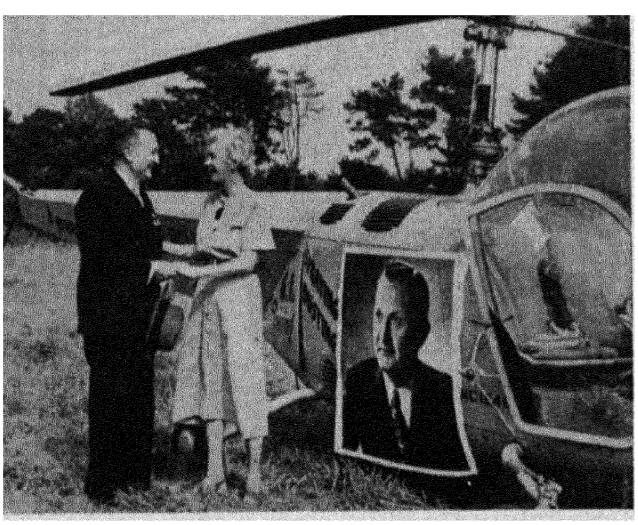
Foreign Trade. (Belgo-Luxembourg Economic union, million francs, 1949; 1950, six months, in brackets): import 81,720 (44,195); export 79,788 (39,291). Main sources of imports (1949; 1950 in brackets) U.S. 18% (17%); France 10% (11%); Netherlands 9% (10%); U.K. 9% (10%). Main destinations of exports: Netherlands 15% (24%); Western Germany 11% (6%); U.K. 9% (7%); France 8% (11%). Main imports (1949): machinery and mechanical apparatus 9·6%; cereals 7·1%; meat and dairy products 5·9%. Main exports (1949): iron and steel manufactures 31·2%; wool and cotton manufactures 14·4%; railway equipment 5·9%.

Transport and Communications. Roads (1949): 6,648 mi. Licensed motor vehicles (Dec. 1949): cars 226,961; commercial 132,987. Railways (1949): 3,209 mi.; passenger-mi. 4,071 million; freight net ton-mi. 3,520 million; freight carried ('000 tons) 60,132. Shipping (July 1949): number of merchant vessels over 100 gross tons 215; total tonnage 435,656. Total length of navigable waterways 967 mi. Air transport (1949): number of flights (arrivals) 10,417; passenger-mi. 120 million; cargo net ton-mi. 3,251,000; air mail carried (metric tons) 662. Telephones (1949): subscribers 438,157. Wireless receiving sets (1949) 1,374,400.

Finance and Banking. (Million francs) budget: (1950) revenue 57,810, expenditure 64,431; (1951 est.) revenue 58,208, expenditure 63,745. National debt (July 1949; July 1950 in brackets): 244,627 (250,521). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 91,100 (90,000). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 952 (781). Bank deposits (Aug. 1949; Aug. 1950 in brackets): 69,800 (68,300). Monetary unit: Belgian *franc* with an exchange rate of Fr. 140·00 to the pound and Fr. 50·50 to the U.S. dollar.

BENELUX: *see* BELGIUM; NETHERLANDS; LUXEMBOURG.

BENTON, WILLIAM, United States senator and publisher (b. Minneapolis, Minnesota, April 1, 1900), graduated from Yale university in 1921. In 1929, in partnership with Chester Bowles, he founded the advertising agency of Benton and Bowles. Benton retired from the agency in 1936, and in 1937 became vice president of the University of Chicago on a part-time basis. At his instance the university acquired Encyclopædia Britannica, Inc., in 1943. He financed



Senator William Benton, with his wife, before setting out for a helicopter tour of Connecticut during his 1950 election campaign.

the company, became chairman of its board and shared its ownership with the university. He launched it into the classroom motion-picture field and served as chairman of Encyclopædia Britannica Films Inc. During World War II, in collaboration with Paul Hoffman, he helped to found the Committee for Economic Development, and he was active in inter-American affairs. Benton was appointed assistant secretary of state by President Truman on Aug. 31, 1945, and served until Sept. 30, 1947. He developed the first United States peacetime programme of international information and educational exchange and took responsibility for U.S. participation in the United Nations Educational, Scientific and Cultural organization. In Dec. 1949 Benton

was appointed a senator from Connecticut, where he had lived for 17 years, by Governor Bowles, to succeed Raymond E. Baldwin, who had resigned. His first year in the senate was marked by his proposal of a "Marshall plan of ideas"; by his vigorous espousal of the Hoover commission recommendations on government reorganization and by his activities on behalf of small business. On Nov. 7, 1950, he was elected to the senate for two more years.

BEQUESTS: *see* DONATIONS AND BEQUESTS.

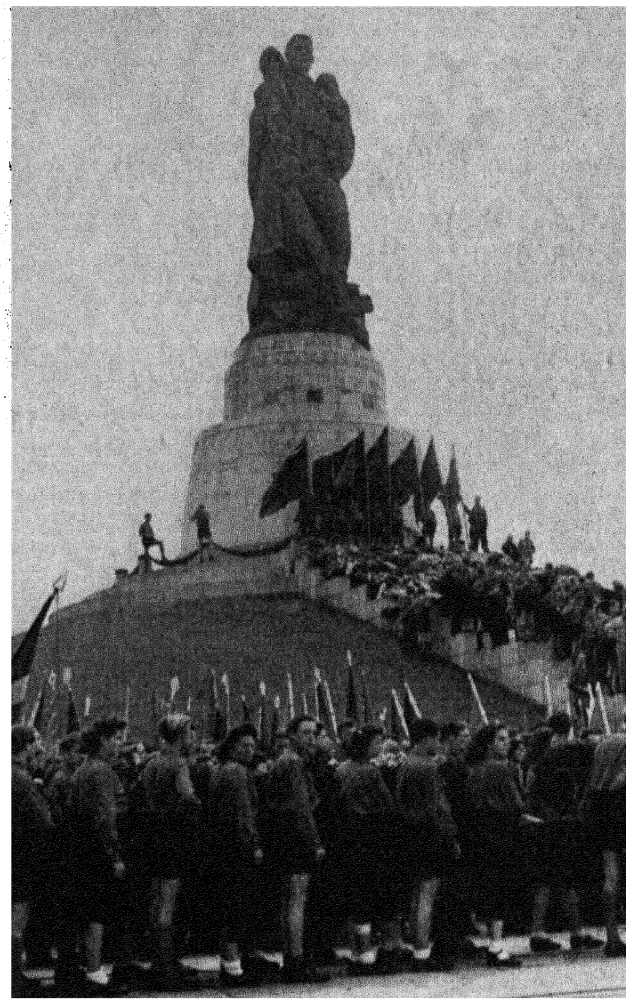
BERLIN. Capital of the German Reich from 1871 to 1945, Berlin was still by 1950 the largest city of Germany. Area: 343·6 sq.mi. Pop.: (1939 census) 4,321,500; (1946 census) 3,179,200 or 24·4% less. From June 6, 1945, to June 24, 1948, Berlin was administered by an inter-Allied government authority (in Russian, Kommandatura) consisting of the commandants of the four sectors of Berlin. After June 24, 1948, when the Soviet commandant proclaimed the dissolution of the Kommandatura, Berlin was in fact divided into two opposing administrations. The three western sectors (pop., 1950 census, 2,142,391) in 1950 were under the authority of the three following Allied commandants: Great Britain, Major General G. K. Bourne; United States, Major General Maxwell D. Taylor; France, General Pierre Carolet. In the Soviet sector (pop., mid-1950, 1,179,000) the civil administrator was Serghey A. Dienghin (who on June 7 succeded the military commandant, Major General Aleksandr G. Kotikov). There were also two rival German city governments and two lord mayors: Professor Ernst Reuter, appointed on Dec. 7, 1948, *Oberbürgermeister* by a city assembly elected by the population of the three western sectors; Fritz Ebert, appointed on Nov. 30, 1948, provisional *Oberbürgermeister* of the Soviet sector by a meeting summoned by the S.E.D. (Communist) party.

History. During 1950, two city councils and two lord mayors still functioned. The fiction of unity was, however, maintained by all four occupying powers. Western Berlin remained outside the western federal republic and elections in the eastern Democratic republic did not include eastern Berlin.

The Eastern German government, which collaborated closely with the Soviet authorities, made no large-scale attempts to capture western Berlin such as led to the airlift in 1948-49. Whitsuntide demonstrations were a fiasco in this respect. Pinpricks such as hold-ups on the international highway from Berlin to Western Germany and in barge traffic on rivers and canals were intermittent and with as little justification as formerly.

Communist attempts to interfere with the Dec. 3 election in the western sectors were unsuccessful. Their proposals for postponement until "free democratic elections" could be held throughout the whole city, in March 1951, were rejected by both the western Berlin government and the three western Allied commandants. These proposals, similar to those unsuccessfully put forward in June, were made on Nov. 26, in a letter to the four commandants and the German administrations in western and eastern Berlin. They would have opened a way to Communist control since they demanded withdrawal of all occupation forces. Soviet troops and German *Volkspolizei* would still be on the outskirts of the city but the nearest Allied troops would be 100 mi. away.

Western Sectors. More than 90% of the 1,664,091 electors in western Berlin refused on Dec. 3 to obey the Eastern German government's instructions to boycott the municipal elections. Having received 653,974 votes or 44·7% (instead of 848,100 or 64·5% on Dec. 5, 1948) the Social Democrats remained the largest party. The Christian Democrats increased their vote from 253,496 (19·4%) to 360,829 (24·6%)



German youth in front of the Russian war memorial in Berlin, during the youth rally at Whitsun, 1950.

and the Liberals or Free Democrats from 214,224 (16·1%) to 337,477 (23·0%).

Grave economic problems continued to worry the city authorities and western Allies. Basically they were political since this former capital could only flourish in a united Germany. Any measures taken meanwhile could only be palliatives. What was needed was a substitute for markets denied to western Berlin in the east. Foreign and western German orders had in the meantime helped to restore normal economic and political conditions. The labour force in the three western sectors amounted to 1,168,000 men and women, with about 30% either unemployed or in makeshift jobs. The city budget was Dm.(w) 1,500 million, with a deficit of Dm. 655 million. But for charges resulting from World War II, this was about the same as the normal budget before 1933 but without the former sources of wealth. Federal republic aid amounted to Dm. 540 million annually. Investment needs in 1950-51, according to city authorities, totalled Dm. 1,134 million. Of this it was estimated that Dm. 160 million could be met from public and Dm. 319 million from private sources. This left Dm. 650 million to be supplied from E.R.P. and G.A.R.I.O.A. (Government Appropriation and Releases in Aid of Occupied Areas) funds.

Great strides in industrial production however were made during the year. In January this was valued at Dm. 95 million, and in September at Dm. 175 million (42·7% of 1936). One important achievement was the completion of the electric power station which made the western sectors independent of Eastern German supplies.

The exchange rate of western and eastern marks varied from 1:8 to 1:4·5. In November it was Dm.(w) 1=Dm.(o) 5. Resulting price differences created serious problems to the western sectors. The prolonged attempt to ruin western Berlin bakers by cheap bread in the eastern sector was one outstanding instance.

Western Berlin's position as an outpost of democracy behind the "iron curtain" received greater consideration from the Federal republic in 1950. On Feb. 3 H. Vockel took up residence as official representative in Berlin of the Bonn government. On March 24 the federal parliament decided that the federal administrative court and certain other federal organs should be transferred to western Berlin and on April 17 a *Bundeshaus* was opened by Konrad Adenauer.

The new western Berlin constitution was promulgated on Oct. 1, in the presence of President Theodor Heuss, members of the federal government and parliament and the three western commandants. When, on Aug. 29, the constitution was approved by the three western commandants it was stated that western Berlin would have the status of a *Land* and a city, but would not be legally recognized as the 12th *Land* of the federal republic. In a speech on Nov. 28 Adenauer declared however that he would do everything to secure this recognition.

A number of exhibitions and congresses held in western Berlin during 1950 attracted world attention. Among them were a motor car show (June 4) and an international exhibition of industry (Oct. 1-14). The latter drew more than a million visitors and was a special attraction during the fortnight preceding the Eastern German election. The International Congress for Cultural Freedom (June 26) brought to Berlin world-prominent anti-Communist spokesmen, and on Oct. 24 a Freedom Bell was unveiled in the tower of the Schöneberg *Rathaus* (present headquarters of the western Berlin city council). The ceremony was performed by General Lucius D. Clay, former U.S. military governor in Germany and president of the organization "Crusade for Freedom" which presented the bell.

An exhibition dedicated to the achievement of Germans from territories east of the Oder-Neisse line was opened by Jacob Kaiser, federal minister of all-German affairs (Nov. 24). He maintained that the problems raised in this issue could be settled within a European framework, but added that "Germany cannot and should not renounce this territory."

Soviet Sector. Indications of food and other shortages were shown by the manner in which eastern Berliners took every opportunity to cross over into western sectors to buy food, though prices there were much higher because of the low rate of the eastern mark. Indicative of the political feelings of eastern Berliners was their response to the invitation from western Berlin authorities to show whether they favoured a united Berlin on the basis of free and secret elections by sending in their used ration cards for September to the Schöneberg *Rathaus*. From an electorate of 850,000, as many as 375,712 responded (Oct. 3-10).

About 60,000 western Berliners worked in the eastern sector and were paid in eastern marks, but had to pay most of their bills in western marks. This was a great hardship since the western sector authorities could compensate only in part for the loss. Communists attempted by all kinds of pressure to get these people to transfer their homes to the Soviet sector.

Greatest activity during the year was in clearing away rubble and in building; not so much private dwellings as enormous public structures. Many historical monuments were destroyed or removed elsewhere. Berlin *Schloss* was taken down to make place for huge tribunes where hundreds of thousands of spectators could watch demonstrations on the great parade-ground of the *Lustgarten*. The monument of Frederick the Great, formerly on Unter den Linden, was removed to Potsdam; and a new Soviet embassy replaced on Unter den Linden the former one, destroyed during World War II. (J. E. Wi.)

BERMUDA. British colony, *c.* 300 small islands in the western Atlantic about 580 mi. east of Cape Hatteras in North Carolina. Area: 21 sq.mi. Pop.: (1939 census) 34,027, incl. 11,481 white; (1948 est.) 36,169, incl. 13,173 white. Language: English. Religion: Christian. Chief towns: Hamilton (cap., *c.* 3,500); St. George (*c.* 1,300). Administration: governor; executive council, 4 official and 3 unofficial members; Legislative Council of 3 official and 6 unofficial members and House of Assembly of 36 elected members. Governor, Lieut. General Sir Alexander Hood.

History. The Admiralty announced that for reasons of economy it had decided to close the dockyard by the end of March 1951. It was stated that Bermuda would continue to be the headquarters of the America and West Indies station but that in future ships of the station would be maintained by ships from the Home Fleet and refits and repairs would normally be carried out in the United Kingdom. The colonial legislature set up a permanent joint committee to handle problems arising out of the dockyard's closure. Another problem that faced the colony was the replacement of its cedar trees largely destroyed by disease; the director of agriculture stated that it would be necessary to spend more than £1 million on re-afforestation. On the credit side there was a record tourist season and work began on a new civilian airport at Kindley Field. A census was held, of which the results were still awaited.

Finance and Trade. Currency: Bermuda pound (at par with sterling). Budget (1949): revenue £1,885,548; expenditure £1,706,587. Foreign trade (1949): imports £7,182,178; domestic exports £40,451; re-exports £902,670. Lilies and lily bulbs were the only important domestic exports, the economy of the colony being primarily dependent on the tourist industry. (J. A. Hu.)

BETTING AND GAMBLING. In 1950 the Royal Commission on Betting, Lotteries and Gaming, which was appointed in 1949 under the chairmanship of H. U. Willink, completed the hearing of evidence. Its report was expected in 1951.

A vast amount of material had been presented for the consideration of the royal commission, and at the end of 1950 it was still not possible to provide a complete and accurate picture of the extent of gambling in Great Britain. There was no evidence as to the number of bookmakers engaged in business, what number of people they employed or how large was their turnover in money. No evidence was presented to show how large the betting industry really was: the total amount of money involved, the number of people employed and the social and economic effects of gambling were all matters of guesswork.

Those who control the totalizators on racecourses and dog tracks are obliged by law to disclose their turnover, and from the duty paid by pool promoters it is possible to assess the amount spent on pools during a year. There are no statistics for the business carried on by bookmakers. They operate in competition with the pools and totalizators, off the course and on the course, legally and illegally, and they are not obliged to publish accounts.

The only official statistics for betting in Great Britain are:

	1950	1949	1948
		(£ million)	
Totalizator at racecourses: . .	£25·5*	£25·8*	£26·3*
Totalizator at dog tracks: . .	£70·5†	£85·6‡	£99·5‡
Pools (all forms):	£52·3†	£64 †	£61 †

Sources: * Race Course Betting Control board. † Customs and Excise return. ‡ Home Office.

These statistics show the continued decline in betting that was apparent in 1949. The changing economic situation may

have contributed to this, for the excess money of the years immediately after World War II was absorbed in the higher cost of living and the more plentiful supply of consumer goods. The taxation imposed on the totalizator at dog racing tracks may have diverted money to bookmakers operating off the course, where better prices can be offered.

Despite the slight decline in turnover on pools, 1950 would be remembered for its record-breaking pool prizes. In a period of less than two months, from Sept. to Nov. 1950, a series of winners drew sums ranging from £68,420 to £104,417. Three of the wins were of over £100,000 and there were three of over £90,000. At the peak win it was decided by the pool concerned to limit future prizes to a maximum of £75,000. By the end of the year this new maximum had not been won. These wins created great interest and it is possible that the increased participation in football pools during the months of Nov. and Dec. 1950, compared with the same period in 1949, was not unconnected with a potential prize of £75,000.

The fact remains that during 1950 there was slightly less active interest in betting, and that those participating were spending less than in previous years. With over 70% of the adult population indulging in a regular gamble it was not possible to assess whether this decline was of a temporary or permanent nature. In horse-racing the attraction remained constant. In dog racing the decline in interest closed a number of tracks. In 1948 there were 209 licensed totalizators. The number was reduced to 127 in 1949; and at March 31, 1950, it had fallen to 120 and the number of pools had fallen from 135 in 1948 to 54 in 1950. Those pools which dropped out represented a small fraction of the total business.

In Australia there was no sign of a decline in betting, which was carried on by more than 80% of the population. In three of the six states there was a government lottery every month (every week in Western Australia), where the prizes ran as high as £15,000 tax free. Only in Victoria and South Australia were lotteries forbidden. The betting turnover for the whole country was over £250 million a year. In New Zealand the interest in betting was as great as in Australia. The government ran ten lotteries each year and also took a large percentage from the totalizator at race courses. In India and Pakistan there were no lotteries but football pools, based on the British games, had been started. South Africa, in contrast, had made all dog racing and football pools illegal.

Europe. The Netherlands had joined Norway and Sweden in sponsoring state-owned football pools based on the results of British games. There was little interest in betting as a commercial organization in these countries. (H. C. LN.)

United States. Gambling, both in terms of money and in incidence, was much reduced during 1950. This was chiefly because of political pressure and investigations which sent many professional gamblers into hiding or caused them to reduce their operations. Early in the year the Brooklyn district attorney, Miles McDonald, began an investigation of alleged " protection pay-offs " by gamblers to New York city police. Continued investigation and prosecutions in New York led to the sentencing of Frank Erickson, popularly considered one of the biggest U.S. bookmakers, to a two-year prison term. Erickson pleaded guilty to conspiracy and bookmaking.

The murder in April of Charles Binaggio, Kansas City, Montana, politician, and his assistant, Charles Gargotta, was generally reported to be attributable to warfare within a gambling syndicate which was nation-wide in scope. Largely as a result of this, the U.S. Senate in May appointed a committee to investigate nation-wide crime, with Senator Estes Kefauver, Tennessee, Democrat, as chairman. This committee's early findings linked gambling more than any other form of crime to political corruption. The committee travelled to Miami, Florida, to Los Angeles, California, to New York and twice to Chicago, Illinois. At the year's end it was in Tampa, Florida, with New Orleans, Louisiana, next on the list. Much violence and corruption was attributed to the investigation; prospective witnesses disappeared and, in Chicago, two investigators employed by the committee were killed. The revelations of this committee were thought to have had some influence on the November elections, contributing to the defeat of some Democratic candidates in Chicago and New York.

Few corrective laws were passed, though in December President Harry S. Truman signed a bill prohibiting the inter-state shipment of gambling slot machines. However, efforts to legalize gambling were generally unsuccessful. California and Arizona voters, in the November elections, refused amendments that would have made gambling in various forms legal. Massachusetts voters turned down a proposed state lottery. The proposal that bookmakers be licensed, made early in the year by Mayor William O'Dwyer of New York, was opposed by Governor Thomas E. Dewey, and no further action was taken on it.

Many gambling houses closed, and many more reduced their staffs because of diminished play. It was a moot point, however, whether this entrenchment was caused more by fear of arrest or by increased cost of living. The betting totals at the nation's race tracks, where betting was legal, fell by an estimated 10%; betting away from the track was thought to have been reduced by as much as 50% from 1949 totals. There was less betting on sports events. Forms of gambling remained the same, with almost the only development a revival of interest in keno in the south and southwest. This represented little more than a substitution of keno for bingo games, however, and the two games are very similar, both being forms of lotto. (A. H. MD.; M. ML.)

BEVIN, ERNEST, British statesman (b. Winsford, Somerset, March 9, 1881), became national organizer of the Docker's union in 1910 and in 1921 secretary of the newly formed Transport and General Workers' union. From 1925-40 he was a member of the general council of the Trades Union congress and in 1937 was chairman. In May 1940 he became minister of labour in Winston Churchill's coalition government and entered the House of Commons for Central Wandsworth. He became secretary of state for foreign affairs in the Labour government in July 1945. In 1949 he signed the North Atlantic treaty and the statute of the Council of Europe on behalf of the United Kingdom. In Jan. 1950, he attended the first Commonwealth Foreign Ministers' conference at Colombo; during his visit he received an honorary doctorate of laws from Ceylon university. On his return journey in February he visited Egypt and Italy to confer with the premiers and foreign ministers of those countries; in Cairo he was received by King Farouk and in Rome he was received by President Einaudi and had an audience with the Pope. On Feb. 23, the foreign minister was elected M.P. for East Woolwich, and on Feb. 28 was re-appointed foreign secretary. In March he had discussions with the French foreign minister, Robert Schuman, when the latter was in London in connection with President Vincent Auriol's state visit. In April he went to Strasbourg to attend a meeting of the European Committee of Ministers and to Paris to attend an O.E.E.C. council meeting. During May he had several discussions with the U.S. secretary of state, Dean Acheson, including one on the question of an Austrian peace treaty at which Robert Schuman was also present. The British foreign secretary also attended the meetings of the Atlantic Treaty council, conferred with the Benelux foreign ministers and received the U.N. secretary general, Trygve Lie. On three occasions during the year, in March, April and June, he underwent surgical treatment; on June 5, the prime minister



Ernest Bevin visiting the Sphinx in Jan. 1950 during his return journey from the Commonwealth foreign ministers' conference in Colombo.

denied rumours that he would be replaced. The foreign secretary attended the Consultative council of the Brussels treaty powers at The Hague on Aug. 1 and took part in the meeting of the committee of ministers at Strasbourg which began on Aug. 3. On Sept. 7, he sailed for New York where he conferred with Dean Acheson and Robert Schuman on Sept. 12 and attended a meeting of the Atlantic council before the opening of the U.N. general assembly on Sept. 19. In early December he had discussions with the Egyptian foreign minister on Anglo-Egyptian political differences. He went to Brussels for the fifth meeting of the North Atlantic Treaty council on Dec. 18-19 and of the consultative council of the Brussels treaty on Dec. 20. While there he held further talks with Acheson and Schuman.

BHUTAN. Semi-independent state in the eastern Himalayas lying between Tibet and India. Area: *c.* 18,000 sq.mi. Pop. (no census ever taken, 1947 unofficial est.): 300,000. Language: a dialect of Tibetan. Religion: mainly Buddhist. Capital, Punakha. Ruler, Maharaja Jigme Wangchuk.

By virtue of the treaty of friendship between the union of India and Bhutan, the text of which was presented to the Indian Constituent Assembly on Dec. 14, 1949, India in 1950 became responsible for the external relations of Bhutan but undertook to exercise no interference in the internal administration of the state, which in effect acceded to India. There was at one time the thought that Bhutan might attain to the status of Nepal, but in fact the new arrangement with India represented a continuance of the relations which existed between Bhutan and the former British government of India. On the transfer of power in India in 1947 Bhutan at once entered into a stand-still agreement with India pending the conclusion of negotiations which came about in 1949.

A mountainous state with a population mainly of Tibetan origin, Bhutan was disturbed by events in Tibet in the latter part of the year; but, although there was the bugbear of imperfectly defined boundaries, the position of this by no means easily accessible country under the Indian umbrella did not cause its people great anxiety. The system of government continued to be that of a secular autocracy, the ruler's possession of absolute authority being tempered by the considerable powers retained by the leading chiefs. (E. HD.)

BILLIARDS AND SNOOKER. These games continued to flourish during the season 1949-50: Walter Donaldson won the world's professional snooker championship, beating Fred Davis by 51 frames to 46 (each player now had two victories to his credit in this event). The United Kingdom professional billiards title went to the 26-year-old John Barrie, of Wisbech, who beat K. Kennerley, of Birmingham. Willie Smith, the 64-year-old Leeds veteran, displayed fine form but just lost to Barrie in the semi-final.

The *News of the World* £1,500 snooker tournament (professional) was won by Joe Davis, who also carried off the "Sporting Record Masters" snooker tournament. Joe Davis retired from championship play in 1947. During the season he took his total of centuries at snooker to 373.

In the amateur sphere, the billiards championship was secured by the brilliant Stourbridge player, Frank Edwards, for the second year running. Alfred Nolan, of Newcastle, a fine young player, won the amateur snooker championship with a victory over Gary Owen, of Great Yarmouth, who was however thought to have a professional future. (R. HO.)

United States. Willie Hoppe, a world billiards champion as far back as 1906, again won the world three-cushion championship in 1950. Willie Mosconi regained the world pocket-billiard title and set a world tournament record for a 4½ ft. by 9 ft. table with a grand average of 18·34. Mosconi and Irving Crane, who took the national title, tied for world honours, Mosconi winning the play-off to gain his fifth world title. (P. BR.)

BIOCHEMISTRY. *Intracellular Distribution of Enzymes.* Progress was made during 1950 in studying the relationship between cell structure and cell chemistry. Investigators developed centrifugation procedures which permitted the separation of four cell fractions from tissue homogenates. The four fractions were: (1) cell nuclei; (2) microscopically visible sub-cellular bodies (mitochondria); (3) sub-microscopic particles (microsomes); and (4) a soluble protein fraction. An important feature of the fractionation technique was the use of hypertonic or isotonic sucrose solutions as the suspending medium.

Using mainly mice and rat liver and kidney it was shown that the enzymes which convert glucose to lactic acid are in the soluble fraction of the cytoplasm. The oxidation of pyruvic acid and of fatty acids is carried out by enzymes which are components of the large sub-cellular particles—the mitochondria. The mitochondria also contain enzymes which can transfer the energy released during the oxidation of pyruvic acid and fatty acids into high energy phosphate ester bonds. The energy stored in these phosphate ester bonds can later be used to synthesize compounds needed by the cell. Assays of these cell fractions showed that such enzymes as succinoxidase, oxaloacetic oxidase and isocitric dehydrogenase which catalyse the aerobic oxidation of glucose are in mitochondria. However, large amounts of isocitric dehydrogenase

also occur in the soluble protein fraction. Cytochrome *c*, a soluble conjugated protein, also occurs in the mitochondria; it was the first protein that had been extracted in a soluble form from what was considered to be the insoluble portion of the cell. These results emphasized the importance of mitochondria as the centres of respiration in the cell.

Amino Acid Requirements of Man. Using diets containing known amounts of the various amino acids W. C. Rose and his co-workers established the minimum amino acid requirements for man. The balance between N intake and N excretion was used as the criterion for the adequacy of various diets fed to adult men. On a diet lacking an essential amino acid the amount of N excreted was more than was consumed in the diet. On a complete diet the amount of N excreted was equal to the amount of N consumed. The essential amino acids and the tentatively recommended daily intake (which is twice the minimum daily requirement) were found to be: tryptophane, 0·5g.; phenylalanine, 2·2g.; lysine, 1·6g.; threonine, 1·0g.; valine, 1·6g.; methionine, 2·2g.; leucine, 2·2g.; and isoleucine, 1·4g. The adult man does not need the remaining amino acids including histidine or arginine. That he can synthesize all the histidine he needs was unexpected.

Hormones. ACTH, which is produced by the pituitary gland and which functions by stimulating the production of cortisone by the adrenal glands, was shown by C. H. Li to be a protein of molecular weight about 20,000. Subsequently, Li showed that small peptide fragments of molecular weight as low as 1,200 retain their biological activity. If the structure of these fragments could be determined and the fragments synthesized it would aid studies of the mechanism of hormone action and immeasurably supplement the limited amount of ACTH. This was desirable since even the partial synthesis of the steroid cortisone was so complex that it would probably long remain prohibitively costly on an industrial scale.

Numerous steroid compounds were tested without success for cortisone activity. The tissues of the body cannot elaborate cortisone from closely related compounds even by the introduction of ketone or hydroxyl groups or a double bond at C_4:C_5 in the cortisone nucleus. The adrenal gland itself appears to be the site of the enzymes that synthesize the active compounds. The many steroids that are found in the gland are possibly intermediate compounds which are retained within the gland and are not released upon stimulation until they have been converted into cortisone or the closely related Compound F. This conclusion was based on the fact that dehydrocortisone (Compound A) is almost devoid of physiological activity in the human being and on the fact that only cortisone and Compound F are found in the urine. It was also found that perfusion of the adrenal gland results in the release only of Compound F and not of any of the other steroids known to be in the gland.

Experiments by W. C. Stadie and his co-workers cast doubt on the earlier suggestion from C. F. Cori's laboratory that insulin acts by relieving the inhibition caused by pituitary or cortical hormones on the hexokinase reaction. This reaction in which glucose is enzymically converted into glucose-6-phosphate, is obligatory in the metabolism of glucose. Stadie found that neither insulin nor adrenal cortical extracts affected the rate of the hexokinase reaction in extracts from depancreatized cats. He also obtained a similar negative result with muscle extracts from rats made diabetic with alloxan. Stadie suggested that the earlier work on the effect of insulin on the hexokinase reaction was misleading because no correction had been made for the presence of glycogen or glycogen breakdown products which interfere with the usual methods of measuring the hexokinase reaction. (*See* also ARTHRITIS; PHYSIOLOGY.) (L. M. K.)

BIOLOGY: *see* BACTERIOLOGY; BIOCHEMISTRY; BOTANICAL GARDENS; BOTANY; ENDOCRINOLOGY; GENETICS; MARINE BIOLOGY; PALAEONTOLOGY; PHYSIOLOGY; ZOOLOGY.

BIRTH STATISTICS: *see* VITAL STATISTICS.

BISMARCK ISLANDS: *see* TRUST TERRITORIES.

BLISS, SIR ARTHUR, British composer (b. London, Aug. 2, 1891), was educated at Rugby school and at Pembroke college, Cambridge. His studies at the Royal College of Music, London, under Sir Charles Stanford, Ralph Vaughan Williams and Gustav Holst were interrupted by World War I during which he was wounded and mentioned in dispatches. His " first period " may be said to have extended from 1918 to 1922, when his composition, mainly for voice and small instrumental ensembles, showed affinities to that of " Les Six " (Auric, Durey, Honegger, Milhaud, Poulenc and Satie) and Igor Stravinsky; his best known work of this time was *A Colour Symphony* (1922). In 1921 he taught composition at the R.C.M. After writing theatre music in California for a while, he composed *Pastoral* (1928), settings of poems by Ben Jonson, John Fletcher, Politian, Theocritus and Robert Nichols. Bliss's " grand manner "—the use of dramatic harmonies and clearly stated rhythms—was already apparent in *Morning Heroes* (1930) a work for orator, chorus and orchestra in memory of his brother, killed in action; in April 1950 this work was again performed with Sir Ralph Richardson as orator. *Music for Strings* (1935), first performed at Salzburg, had, too, an elegiac character. In 1935 Bliss wrote the music for the H. G. Wells film *Things to Come*. Later he composed the music for three Sadler's Wells ballets: *Checkmate* (1937), *Miracle in the Gorbals* (1944) and *Adam Zero* (1946) In 1939 his *Pianoforte Concerto* was first performed, at the Carnegie hall in connection with the New York World fair, by Solomon and the New York Philharmonic orchestra conducted by Sir Adrian Boult. From 1942 to 1944 Bliss was director of music of the British Broadcasting corporation. In 1948 he produced his first opera *The Olympians* (with libretto by J. B. Priestley). In the 1950 Birthday Honours, Bliss was knighted. At Edinburgh, on Sept. 1, the Griller quartet gave the first performance of his *Quartet No. 2.*

BOLIVIA. Land-locked republic in central South America and one of the highest inhabited areas of the world. Area: 416,040 sq.mi. Pop.: (1900 census) 1,816,271; (mid-1949 est.) 3,990,000. Estimated racial distribution: Indian 52%; *mestizo* 28%; white 13%; Negro 0·2%; unspecified 6·8%. Language: Spanish, but the Indians speak Quechua and Aymará. Religion: predominantly Roman Catholic. The legal capital is Sucre (pop., 1946 est., 32,000); the actual seat of government is La Paz (pop., 1946 est., 301,000). Other chief towns (pop., 1946 est.): Cochabamba (80,000); Oruro (50,000); Potosí (40,000). President of the republic, Mamerto Urriolagoitia.

History. Both the political and economic history of Bolivia continued to be strongly influenced by its pre-eminent industry which is mining. The latter included about 16% of the world production of tin, which was in 1950 being exported in almost equal amounts to the United States and the United Kingdom. Miners' unions, with memberships estimated at about 310,000 were especially active in political affairs during the year and represented the principal strength of the two more aggressive minority parties, the leftist Partido de la Izquierda Revolucionaria and the rightist Movimiento Nacionalista Revolucionario. Extensive strikes, political feuds that were sometimes violent and a revolution in force which disrupted mine operations in many areas during 1949 tended to abate during 1950.

Despite political tension, 1950 marked many notable advances in Bolivia. The new petroleum industry produced more than 600,000 bbl. Improvements in primary education, now compulsory, were believed to have reduced adult illiteracy to about 75% as compared with an estimated 85% in 1945. The Ministry of Health established the first clinics in six frontier areas which had never before had health services. (C. M. Wi.)

Education. (Schools, 1944): rural 1,513, pupils 110,000; elementary 1,740, pupils 144,056; secondary 55, pupils 17,496. There were universities at Cochabamba, La Paz, Ororo, Potosi and Sucre.

Agriculture. Bolivia continued to be dependent on imports of foodstuffs. Main crops included maize, barley, wheat, rice and potatoes. Livestock (1946 est.): cattle 3,039,000, sheep 4,289,000, goats 1,809,000. Forest products: rubber (1949 exports, about 2,000 short tons) and cinchona bark.

Mineral production. Exports (1949, short tons): tin 38,166; lead 29,048; copper 5,593; zinc 19,432; antimony 11,326; wolfram (WO_3 content) 1,701 and silver (6,622,900 oz.).

Foreign Trade. (1949) exports $107,100,000; imports $71,400,000. Tin accounted for about two-thirds of the exports.

Transport and Communication. Railways (1950): 1,608 mi. Several lines were under construction in 1950, including two from Brazil and Argentina, respectively, to Santa Cruz. Roads (1949): 15,420 mi. of which 4,008 mi. improved. About 7,300 motor vehicles were in operation in 1947. More than 50% of the 8,300 telephones in 1948 were in La Paz. Wireless receiving sets (1950): 150,000.

Finance. Budget (1950 est.): balanced at 2,783 million bolivianos. Internal debt (Nov. 1949): 2,405 million bolivianos; external debt (Dec. 1947): $60,280,923, plus arrears of interest totalling $74,244,100. Notes in circulation (Aug. 31, 1950): 2,822 million bolivianos. Monetary unit: *boliviano* with an official exchange rate of 1·65 U.S. cents per boliviano or £1 = 169·68 bolivianos. (J. W. Mw.)

BONAIRE: *see* NETHERLANDS OVERSEAS TERRITORIES.

BOOK COLLECTING AND BOOK SALES.

The year 1950 was not a conspicuous one in the auction rooms of London or New York. In London the effect upon the market of the devaluation of the pound was at once apparent, and there was a marked rise in the price of books or manuscripts which were likely to be bought for or sold to America. In spite of this the number of notable sales was small and for the most part was made up of miscellaneous collections of books of average quality which at times became tedious in their similarity. Among the better sales in London were further portions of Sir Leicester Harmsworth's enormous library: the sale of his collection of Americana, which began in 1949, reached the letter H (it was being sold in alphabetical order). Some of the rare items in this field illustrated more than anything else the effects of devaluation, and an increase was shown on the very high prices reached at the important sales of Americana in the middle 1920s, when Harmsworth was a heavy buyer himself. Perhaps the most interesting sale in London during the year was that of Lord Malmesbury's Hurn Court library, which was sold in three portions. It had been collected by two owners and their descendants over a period of 200 years; the books were in fine state and well bound; nearly all subjects were covered, including art, science, literature, travel, atlases and coloured plate books of flowers and birds; and prices at this sale were distinctly high because an undisturbed library of this calibre always encourages spirited bidding.

Another feature of the year's sales was the high price realized by a few fine 16th- and 17th-century books of English literature: a first edition of the *Mirrour for Magistrates* (1559) sold for £580; the first editions of Vaughan's *Silex Scintillans* (1650) and *Olor Iscanus* (1651) for £260 and £150 respectively (the former copy fetched £68 in the Huth sale in 1919 and the highest auction price that a copy of the latter had previously made was £56 in 1923); and a copy of Lyly's *Euphues* (two parts 1581-82) fetched £680, having realized £120 in 1932. The popularity of bird and flower books continued to flourish, although there was a marked fall in the works of John Gould, whose large folios with their brilliant coloured plates of birds appear too frequently. The interest shown in genuine specimens of books with fore-edge paintings was unabated and a fine example from the Edwards of Halifax bindery, with paintings on the reverse sides of the vellum, sold for the remarkably high price of £240. Since World War II Boswell and Johnson had been steadily regaining the favour that they held in the boom of 1928-29, and high prices were realized by three of their works: £215 for a copy of Boswell's anonymous and trifling poem *The Cub at Newmarket* (1762) £165 for Johnson's *Miscellaneous Observations on Macbeth* (1745); £155 for an uncut copy in original wrappers of Johnson's *Plan of a Dictionary* (1747); and £480 for Boswell's *Life of Johnson* (1791) with the original leaf on conjugal infidelity.

Towards the end of the year a few quite outstanding books were sold in London. These belonged to the Marquess of Bute, a selection of whose library had already been sold privately to a London bookseller. The most important book of the sale was an illustrated English incunable, *The Contemplacyon of Synners*, printed by Wynkyn de Worde in 1499 and bound in contemporary stamped English calf; it fetched £3,800. An imperfect copy of Caxton's edition of Gower's *Confessio Amantis* (1483) sold for £2,900. The first book printed in Paraguay, Nuremberg's *Diferencia* (1705), fetched £1,800. Among manuscripts and autograph letters were a 15th-century illuminated Parisian missal of fine quality which realized £5,000 and a most important series of 177 letters from Darwin to Sir Charles Lyall relating to the *Origin of Species*, which fetched £5,200.

In New York the most notable sale took place at the end of the year when the first portion of Lucius Wilmerding's library, comprising the English literature and colour-plate books, was sold. His English books consisted of first editions of famous works in English literature, mostly rebound in morocco, and many of the "high spots" beloved by book collectors for now nearly 100 years were included. The general impression was that the English books, particularly those of the 17th century, sold very well. On the other hand, most of the prices of the colour-plate books showed a marked fall. The French books and bindings in this remarkable library were to be sold in 1951.

During the year certain activities took place in the antiquarian book trade which are worth recording. The International League of Antiquarian Booksellers held their second conference in Paris in September. The American association, which had sent an observer to the previous conference, applied for membership and was elected to the league. In England the Antiquarian Booksellers' association held a second series of lectures for its members; and for the second time since its foundation in 1906 a woman was elected its president. For the first time in England a series of broadcasts devoted to book collecting was given by the B.B.C. Certain regulations controlling the import and export of rare books continued to hamper trade between countries, but it was hoped that the committee set up to advise on the policy to be adopted by the government in controlling the export of works of art, including books, would be able to make recommendations for easing controls.

The ascendancy of the American university library over the private collector in nearly all fields of book collecting, which had been evident in the market since 1939, was again marked in 1950. Its influence was shown in an increasing number of booksellers' catalogues by the quoting of library holdings and by the ranging of books under subjects to attract the library research worker. More than one American librarian during the year publicly declared the debt of U.S. libraries to the British antiquarian book trade. (C. D. M.)

BOOK PUBLISHING. During 1950 book publishers in Great Britain produced 17,072 titles of which 5,334 were reprints and new editions. It was considered that the 1950 total, slightly larger than the 1949 total of 17,034 titles and slightly smaller than the 1937 total of 17,137 titles, which was the highest figure ever recorded, might indicate that book publishing had attained its full rate of output after ten years of restricted production.

The period April 1949-March 1950, after nine years of paper rationing, was the first year in which British book publishers were wholly free from the governmental control of their chief raw material. Reviewing that first year of freedom, the Publishers' association in a report issued in March 1950 said: " After a decade of restraint of output on the one hand and unprecedented ease of selling on the other, they [the publishers] discovered themselves free once more as individual publishers and as a trade to exercise the old virtues and the old vices, to enjoy advantages and to ignore or take arms against dangers which since 1939 had lost much of their reality."

The two most fundamental problems, this report stated, were " a perceptible though not yet alarming " fall in the sale of individual titles and the disquieting and consistent rise in the costs of production. In Nov. 1950 paper, once 1½*d.* a pound, was 10*d.* a pound, printing was four times what it was in 1938 and the rise in binding costs was higher still. By contrast, the published prices of many categories of books in 1950 were only one and a half times what they had been before World War II. The reason for this apparent anomaly was that publishers, during the years of restricted output, had been able to sell every copy of every book they could manufacture. Risk, the costliest factor in book publishing, was absent; but once output was no longer restricted and supplies became greater than the demand, the risk returned.

The pattern of book publishing suddenly took on a new shape: at the beginning of the year the papermakers had complained of a rapid and unexpected change from the seller's to the buyer's market, but by the summer of 1950 the position had reversed itself once more. The world shortage of raw materials and the heavy demand for Scandinavian pulp by the U.S. brought about a dramatically sudden and sharp deterioration in the paper supply situation in Britain. In November the president of the Publishers' association stated that the " drastic and dangerous reduction " in the amount of paper available for book production and an impending shortage of strawboard for bookbinding which was scarcely less serious might mean that once more many books would be out of print for long periods.

Despite all these difficulties the publishing business continued quarter by quarter to beat all previous records in the volume of business done. The amount of trade done by publishers in 1949 had reached the unprecedented figure of £34,297,252 (the prewar average annual total was approximately £10 million). During the first six months of 1950 publishers' total sales amounted to £16,683,895, an increase by more than £834,000 on the turnover of the corresponding period of 1949. Since the book-trade business had invariably been greater in the second half of the year than in the first, there was little doubt that the 1950 total would surpass the 1949 record. An analysis of publishers' output made by the *Bookseller* showed the average price of books published during the first six months of 1950 to be 12*s.* whereas in the following six months it was 12*s.* 3*d.* These statistical averages are based on titles only: many of the books most in demand cost much less than 12*s.* each. One of the most welcomed results of increased production facilities was the restoration during the year of several famous series which offered the world's greatest literature in attractive volumes for 4*s.* 6*d.* or 5*s.* each. (E. Se.)

United States. New books and new editions issued in the United States in 1950 were up 130 over the total of 1949, an increase of 1%; but the 1950 total of 11,022 was only slightly below the record of 1940 when 11,328 titles were issued, and about 10% more than the 1930 total. Fiction, representing 17% of the year's output, showed the largest net increase of the year, followed by juveniles, general literature and technical books. The largest net decreases were for the categories of domestic economy and business. About 13% of the titles handled during the year were imports. Pocket books showed an increase of 281 new titles over the 1949 total of 659.

Heading the best-seller list for fiction in 1950 based on trade sales alone, was *The Cardinal* by Henry Morton Robinson, the only novel on the list with a religious theme. Second was *Joy Street*, by Francis Parkinson Keyes, which did not appear in the bookstores until the last month of the year. Third to tenth on the list, in that order, were *Across the River and into the Trees*, by Ernest Hemingway; *The Wall*, by John Hersey; *Star Money*, by Kathleen Winsor; *The Parasites*, by Daphne du Maurier; *Floodtide*, by Frank Yerby; *Jubilee Trail*, by Gwen Bristow; *The Adventurer*, by Mika Waltari; and *The Disenchanted*, by Budd Schulberg.

The list of nonfictional best sellers for the year, based on trade sales alone, was topped by *Betty Crocker's Picture Cook Book*, followed in second place by *The Baby*, a book of humorously captioned photographs.

One publishing innovation of the year was Simon & Schuster's experimental issuance of new titles in full-priced hard-cover and low-priced ($1) paper-covered editions simultaneously. This was done with *The Cardinal*, leading fictional best-seller of the year, with encouraging results. Among booksellers, however, as shown after questioning by the American Book Publishers council, the preference was for a one-year lag between first editions of fiction and hard-cover reprints, and for a year and a half between hard-cover and paper-bound reprints. Price news in the pocket-book field included the issuance of giant-sized reprints at 35 cents instead of the usual 25 cents, a notable example being the two-volume reprint of Robert E. Sherwood's *Roosevelt and Hopkins*. (X.)

BORNEO: *see* British Borneo; Indonesia.

BOTANICAL GARDENS. The year 1950 was one of the wettest for several decades and was in marked contrast to 1949 which was one of the driest and hottest. Growth in practically all gardens was luxuriant, though the flowering of many sun-loving plants was not up to normal standards.

The large influx of Himalayan seeds received late in 1949 and early in 1950 from the collections in Nepal of O. Polunin and in Bhutan of G. Sherriff and F. Ludlow, caused great activity in the propagation departments of all botanic gardens, and the damp summer was favourable to the growth of seedlings from this region. By the end of October several interesting plants had already flowered from among the bulbs and tubers sent back from Bhutan, notably *Lilium Wallichianum* and a new species of Codonopsis.

The strikes in the printing industry affected considerably the usual publication of reports and information from the Royal Botanic garden at Kew and other gardens. Part I of the *Kew Bulletin* for 1950, however, contained an important further contribution from E. M. Marsden-Jones and W. B. Turrill, the keeper of the Herbarium at Kew, dealing with their researches on *Silene maritima* and *S. vulgaris*. This part contained an account of their genetical experiments involving plants from the French Alps. W. B. Turrill was also president of the botany section of the British Association for 1950 and delivered an address on experimental methods in taxonomy. Representatives of the main botanic gardens

in Great Britain attended the International Botanic congress at Stockholm held in July. The discussions held there on nomenclature of plants were of particular interest and importance.

A brief report of the tour in Australia in 1949 of the director of the Royal Botanic gardens, Kew, Sir Edward Salisbury, is contained in part I of the *Kew Bulletin* for 1950. He was able to make recommendations for the establishment of a botanical garden in Western Australia and to inspect a potential site, which he said would serve admirably to establish a collection of the extremely rich and scientifically interesting native flora.

At the Cambridge Botanic garden, H. Gilbert-Carter retired from the post of director and university lecturer in botany after many years' service. He marked his year of retirement by the publication of a valuable *Glossary of the British Flora* (Cambridge, 1950). J. S. L. Gilmour, the director of the Royal Horticultural society's gardens at Wisley, was appointed to succeed him. At Edinburgh, Roland E. Cooper retired from his post as curator after long service and was succeeded by E. E. Kemp. The new Peatwall garden in the Edinburgh Botanic garden attracted much attention, and proved particularly favourable for the establishment of difficult species of Himalayan Primulas and Meconopsis. (P. M. S.)

United States. The secretary of agriculture, Charles Brannan, dedicated a memorial tree (*Cedrus deodara*) on the grounds of the National arboretum in Washington, D.C., during the 50th anniversary of the American Association of Nurserymen in July, while the Morris arboretum in Philadelphia started extensive studies in breeding rhododendrons and azaleas. *Plants and Gardens*, publication of the Brooklyn Botanic garden, reached nearly 10,000 subscribers during the year. The Long Island Agricultural and Technical institute at Farmingdale, New York, began to conduct a few studies in plant materials on the 400-ac. W. R. Coe estate in Brookville, now under its general supervision. The American Association of Botanic Gardens and Arboretums withdrew its affiliation with American Institute of Park Executives and, at the close of the year, was unattached to any other organization. (*See* HORTICULTURE.) (D. W.)

BOTANY. The most notable event of 1950 was the seventh International congress held at Stockholm, July 12-20, ten years later than originally proposed, under the presidency of Professor C. Skottsberg. F. T. Wahlen spoke on "Botany and World Husbandry" and pointed out the relationship between botanical science and world energy and the importance of achieving a better balance between consumption and production. At the second plenary session F. Verdoorn spoke on "The History of International Botanical Congresses" and F. W. Went on "The Effect of Climate on Plant Growth and Distribution" describing the work done at Pasadena, California. The presence of a delegation from the U.S.S.R. naturally aroused great interest. The Soviet delegates described new work on graft hybrids and claimed it confirmed T. D. Lysenko's view that the chromosome theory of heredity was erroneous. The authors and titles of the Soviet communications were: I. E. Glyschenko, "Hybridization of Plants by Grafting"; K. S. Sukhor, "The Directed Influence of the Pathogenic Viruses on Plants"; N. V. Turbin, "New Experiments Elucidating the Nature of Fertilization"; V. N. Stoletov, "The Nature of Hybrid Plants"; P. A. Baranov, "Cultivated Plants during Extreme Conditions of Life"; and V. N. Sukachev, "On the Exploration of the Vegetation of the Soviet Union." It was evident that the Michurin influence was still paramount in the U.S.S.R.

The section on nomenclature did much useful work in clarifying and improving the international rules, particularly with regard to the naming of hybrids and methods of typification. Botanists were co-operating with horticulturists in formulating a code for plants of horticultural origin. Proposals for a list of *Nomina Specifica Conservanda* were rejected by a large majority.

It was agreed that future international botanical congresses should be held alternately in Europe and outside Europe at three- or four-year intervals and that the next one should be in Paris in 1954. It was also decided that a bureau of plant taxonomy and nomenclature should be set up and that an international society of plant taxonomy should be established. After the congress there were a number of excursions, those to Lapland being particularly popular and well attended by taxonomists and ecologists.

The fifth International Congress for Microbiology was held at Rio de Janeiro, Aug. 17-24. It included an exhibition on microbiology, parasitology and hygiene and another on the life and works of Louis Pasteur. Aspects of medical mycology received attention as the gravity of granulomas in South America and the frequency of other fungal diseases had given to mycology a special importance there. It was decided to hold the next congress in Rome in 1953.

W. B. Turrill gave the presidential address to the botany section of the British Association meeting at Birmingham in August. He spoke on "Modern Trends in the Classification of Plants," saying that plant taxonomy was tending towards a synthesis of the older methods based on external morphology with those due to newer developments in the knowledge of plants. Anatomical techniques made it possible to determine incomplete specimens; associations of chemical compounds threw light on taxonomy where attention to single substances might lead to error; and cytological studies might provide valuable evidence, though there might be danger if the cytologist did not take proper care in identifying and preserving the specimens on which his work was based. Genetical research was giving the greatest assistance to taxonomy especially in proof or disproof of hybrid origin. Thus many so-called species of *Centaurea* had been proved by analysis and synthesis to be hybrids.

At a joint discussion on "The Present Position of the Theory of Continental Drift," which aroused much interest, Professor R. D'O. Good gave the main features of Angiosperm distribution that were difficult to explain without assuming that the chief land masses were once closer together.

At a joint meeting on "Cytology and Genetics in relation to the Classification of Plants and Animals," L. Sachs gave an account of the combination of a study of gross morphology with a detailed chromosome investigation in the *Triticinae*, a subtribe of Gramineae, and there was an important discussion on the rehabilitation of derelict areas at which W. J. Rees talked on "The Vegetation of Derelict Areas" and W. B. Newton on "The Afforestation of Opencast Mining Areas."

At the Linnean society there was a joint discussion with the Systematics association on biometrica and systematics. R. Melville spoke on the discrimination between taxonomic groups in which the morphological characters overlap by the determination of mean values with their standard deviations of probable error and the use of Cartesian co-ordinates for the definition of leaf-shape. Simple mathematical treatment of co-ordinate systems enabled related series of shapes to be obtained which could be compared with those occurring in nature. At a discussion at the Linnean society on succulent plants, E. M. Delf gave an account of their principal biological features. Professor T. A. Bennet-Clark described their physiology, mentioning their very low rate of transpiration per unit area of assimilating surface and saying that their most striking feature was biochemical, carbohydrates being

converted into organic acid in the dark, the acid disappearing and carbohydrate re-forming on illumination.

In the "Biological Flora of the British Isles," D. A. Webb dealt with the "mossy" saxifrages (*Saxifraga* L. Sect. *Dactyloides* Tausch.). He recognized only four species in the British Isles: *S. caespitosa* L.; *S. Hartii* D. A. Webb; *S. hypnoides* L.; and *S. rosacea* Moench; with many interspecific hybrids. *S. Hartii* is confined to the island of Arramore in County Donegal. In the same series ("Biological Flora") V. C. Chapman described *Halimione portulacoides* (L.) Aell., and J. R. Sealy and D. A. Webb gave an account of *Arbutus Unedo* L., which was confined to Kerry but formerly had been much more abundant in Ireland.

The Scottish Seaweed Research association reported that the survey of the seaweed resources of the sublittoral zone had been continued in the Shetlands, Outer Hebrides, Teree, west Kyntyre and Arran. They had considered the possibility of introducing foreign buoyant types such as *Macrocystis* into British inshore waters and sporelings were being cultivated from spores flown from British Columbia. Further methods had been developed for the harvesting of seaweeds and for investigating the chemical composition and properties of seaweeds and seawater.

W. A. P. Black studied the seasonal variation in weight and chemical composition of common British Laminariaceae and found that it should be possible to predict the approximate composition in future years. E. J. H. Corner produced "A Monograph of *Clavaria* and Allied Genera," the first of a series to be published by the Annals of Botany company. This gave detailed accounts of the developmental morphology of these fungi as well as diagnostic descriptions and some keys. The author considered that a number of natural groups could be separated from the old groupings under *Clavaria*, *Lachnocladium*, etc., and recognized 27 genera instead of the customary 11 or 12.

E. Gaumann's important work "Principles of Plant Infection," originally published in German in 1943, appeared in an English translation by Professor W. B. Brierley and several assistants. It gave an account of the general theories and principles of plant pathology and surveyed the whole biological problem of infection.

A. R. Gemmell showed that fruiting was more frequent in monoecious than dioecious mosses, that sterile species produced very few varieties, that dioecious mosses were more widely distributed than monoecious or sterile forms and that a species was more likely to be widely distributed in proportion to the number of varieties produced by it, even if the range of the varieties was excluded. The outbreeding system was the operative factor: it allowed the display of one mutant against a variety of genic backgrounds, thus leading to greater genetic diversity and hence to greater versatility.

C. Leighton Hare described the structure and development of *Eriocaulon septangulare*. The seedling showed a clear correlation with environmental conditions, possessing a peculiar anchoring device which secured it to the substratum before the radicle appeared. C. Thomas described a new orchid, *Epipactus cambrensis*, from Kenfig Barrows, Glamorgan. T. G. Tutin described species pairs in *Anthoxanthum*, *Dactylis* and *Phleum* in which the members of each pair differed in chromosome numbers (one diploid, the other tetraploid) and had somewhat different ecological preferences and geographical distributions. (*See* also HORTICULTURE.)

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BOWLS. In 1950, 2,117 clubs were affiliated to the English Bowling association. In the national championships held at Paddington B. C., Aug. 14-22, J. Thompson (North Shields West End) won the singles, L. H. Pipler and E. P. Baker (Poole Park, Dorset) the pairs, Hereford the triples and Richmond Park Hampshire, the rinks.



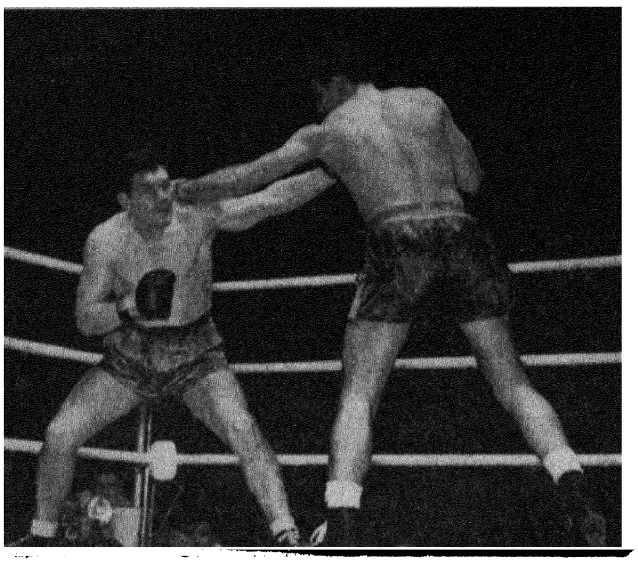
Women bowlers taking part in the amateur national championships which were held at Wimbledon in Aug. 1950.

The International tournament for the *News of the World* trophy, played at Queens Park, Glasgow, on July 5-7 was won by Scotland. England beat Australia in the test match at Oxford by 35 shots (118-83).

Devon won the Middleton cup for the third successive year, thus creating a record. The London and Southern Counties Bowling association gold badge was won by G. F. Trieb (Mansfield), and the Lonsdale tournament by F. E. Thompson (Barnes Lonsdale). The National Welsh B. A. singles was won by A. Thomas (Daffen-Llanelly), the pairs by Ivor Davies and F. L. Cottle (Sophia Gardens, Cardiff) and the rinks by Newport Athletic. The Scottish B. A. singles was won by J. C. Irving (Lockerbie), the pairs by W. Elliot and E. Winning (Catrine) and the rinks by Crosshouse. The Irish B. A. singles was won by S. J. Thompson (Willowfield), the pairs by Musgrave and the rinks by Leinster. Mrs. Buckland (Surrey) won the English Women's B. A. championship. (*See* also EMPIRE GAMES.) (J. W. FR.)

BOXING. Four British championships changed hands during 1950. The main event of the year was the defeat of Bruce Woodcock on Nov. 14 by Jack Gardner, a 24-year-old small-holder and former guardsman from Market Harborough in Leicestershire, who had previously been an amateur champion.

Gardner's ability to "swallow" punches which would have knocked the senses out of most of his adversaries brought him through his early trials as a professional. His



Jack Gardner (right) seen during his contest with Bruce Woodcock in Nov. 1950, in which he became the British and Empire heavyweight champion.

victory over the Welshman Johnny Williams, a young man of immense talent but short of the desired stature for a heavyweight, was the bitterest, most savage and most discussed fight of the year. A gash sustained a month before above his high, prominent cheek-bone had interfered with Williams's preparation for the fight with Gardner; and he was too often out of distance with his left-hand leads. After six rounds Gardner, who was using his feet and weaving, slipping leads and riding punches in something like the style of a champion, was well in front. Williams had not only the cut under his left eye opened but also one under his right eye and finally saw that his only chance was to go for a knock-out: in a savage assault he cut and blacked both Gardner's eyes, lacerated his mouth and had him reeling helplessly against the ropes. Gardner's capacity for "taking it" was established then if ever it was, and his earlier advantage won him the fight. Williams collapsed and was taken to hospital suffering from nervous and physical exhaustion, narrowly defeated on points.

Woodcock was proved to have gone back a long way when he and Gardner met for the championship. When his left eye was closed, it appeared that his right eye had been sightless since his calamitous fight with the American Joe Baksi in 1947; he was blind when he surrendered, but he had already been well outpointed.

Freddie Mills, like Gardner a man of magnificent physique and an iron frame, lost the world light-heavyweight championship to the American Joey Maxim. He then retired, and Don Cockill defeated Mark Hart for the vacant British championship at 12st. 7lb.

The middleweight championship changed hands twice: first Albert Finch won it from Dick Turpin; then Randolph Turpin, Dick's young brother, knocked out Finch, who had had to waste to make the weight and was so weak at 11 st. 8 lb. that this defeat could be disregarded in a survey of his prospects in the cruiserweight class. Randolph Turpin, a 22-year-old natural middleweight, was a great and ruthless puncher but neglected the methods of softening up an opponent and boxing for the winning opening.

Eddie Thomas did not have to defend his welterweight championship in 1950, but Terry Ratcliffe, the former amateur champion, seemed likely to develop into a strong challenger. Billy Thompson retained the lightweight championship against the challenge of Tommy McGovern. Danny O'Sullivan, the bantamweight champion, was badly punished by the Spaniard Luis Romero, in a European championship match. There was no British flyweight champion. Since the retirement of the Ulsterman Rinty Monaghan, Terry Allen won the world and European titles and later lost both to Dado Marino (Hawaii) and Jean Sneyers (Belgium). (L. WD.)

United States. An attempt by Joe Louis to regain the world heavyweight championship title from Ezzard Charles, Cincinnati Negro, highlighted boxing during 1950. Charles won in 15 rounds in New York, on Sept. 27, and became recognized as champion in the United States.

Four new champions were produced. In addition to Sandy Saddler, the Harlem Negro who on Sept. 8, in New York, lifted the world featherweight championship from Willie Pep (Hartford, Connecticut), they were: Dado Marino, Hawaii, in the flyweight class; Vic Toweel, South Africa, in the bantamweight class; and Joey Maxim, Cleveland, Ohio, in the light-heavyweight class.

Jake La Motta, the world middleweight champion, successfully defended his title against Tiberio Mitri, Italy, in New York (July 12), and against Laurent Dauthuille, France, at Detroit (Sept. 13).

Marino acquired the world flyweight title on Aug. 1 by winning a 15-round decision over Terry Allen, Great Britain, at Honolulu. Toweel succeeded Manuel Ortiz, El Centro, California, as world bantamweight champion, by winning a 15-round decision in a bout held on May 31 at Johannesburg, South Africa. (J. P. D.)

BOY SCOUTS. Scouting in Great Britain and the Commonwealth continued to make progress during 1950. In Britain membership amounted to 471,364. The figure of 43,771 adult leaders showed an increase of 2,287 on the previous year; but despite this a headquarters committee on manpower requirements placed the deficiency of scout leaders at 25,400.

More than 6,000 British scouts went abroad and more than 3,000 scouts from 21 countries visited the United Kingdom: a record number for a year in which no world jamboree was held. Area jamborees attended by overseas scouts were held in Herefordshire, Nottinghamshire, Lancashire and Perthshire. A contingent of 1,300 scouts made the Holy Year pilgrimage to Rome; and a specially selected party of eight King's scouts with a scout commissioner represented the United Kingdom at the American jamboree at Valley Forge, Pennsylvania.

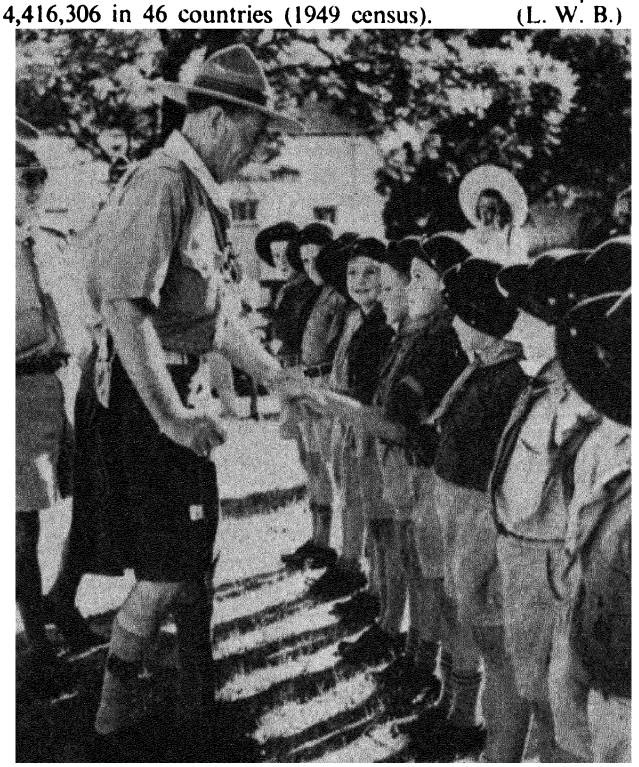
During the year it was announced that 42·1% of scout groups were "open," while 28·1% were sponsored by the Church of England, 6·7% by the Methodist Church, 3·8% by the Roman Catholic Church, 10·9% by schools and hospitals and the remainder by other churches and organizations. In September the Air Ministry agreed to recognize air scout troops which reached a sufficient standard and to help them wherever possible. (RLN.)

United States. In 1950 the crusade to "Strengthen Liberty," which was inaugurated in 1949, was continued, with emphasis on patriotism, good citizenship and the traditions of America. A "Report to the Nation" on scout service throughout the country was presented to President Harry S. Truman by 12 representative scouts. A similar report was made to the United Nations on the service to scouting abroad. After a conference with civil defence officials in Washington the scouts adopted a plan of co-operation with local, national and civil defence agencies.

The Boy Scouts of America was formed as an organization in 1910 and the 40th annual meeting of the National council was held in Philadelphia on June 29 and 30. This was followed by a jamboree at Valley Forge attended by 47,163 boys and leaders. The speakers at the jamboree included General Dwight D. Eisenhower and President Truman.

Membership on Sept. 30, 1950, was 2,603,424 men and

boys organized in 75,639 units. There were 1,920,946 boys and 682,478 leaders. The world scout membership was 4,416,306 in 46 countries (1949 census). (L. W. B.)



The chief scout, Lord Rowallan, seen with Southern Rhodesian cubs at Umtali during his visit to Africa in 1950.

BRAZIL. Largest of the Latin American republics, the United States of Brazil has a common frontier with all South American countries except Ecuador and Chile. Area: 3,286,170 sq.mi. (48·3% of the whole of South America). Pop.: (1940 census) 41,236,315; (mid-1949 est.) 49,350,000. The nationality of the population as shown by the 1940 census was: Brazilian-born 39,822,487, naturalized 122,735, foreign 1,283,833, nationality unknown 7,260. Among the foreign-born residents there were *c.* 354,300 Portuguese, 285,000 Italians, 147,900 Spaniards, 141,600 Japanese, 71,000 Germans, 41,000 Poles and 245,000 citizens of other countries. Among the Brazilian-born population, about half was of European stock; the remainder included 8,744,400 mulattoes (21%), 6,035,700 Negroes (14·6%), 5,500,000 Indians and *mestizos* (13%), and 250,000 Asiatics. Language: Portuguese. Religion: predominantly Roman Catholic (94·4%), with over one million Protestants of various denominations and 110,750 Jews. Capital, coterminous with the federal district: Rio de Janeiro (1949 est.) 2,091,394. Other chief towns (pop., 1940 census): São Paulo (1,253,943); Recife (327,753); Salvador or Baia (293,278); Pôrto Alegre (262,694); Belo Horizonte (179,770); Belém (166,662); Santos (159,648). President of the republic in 1950, Eurico Gaspar Dutra.

History. 1950 was a lively year for the Brazilians. The world football championship was played in Brazil, in an atmosphere of frenzied excitement, during June and July. Presidential elections were held in October. Throughout the year inflation continued to increase. To finance schemes for the development of the country's natural resources, large sums were allocated by the government and substantial loans raised at home and abroad. In the second half of the year Brazil's primary products fetched ever-rising prices in the markets of the world. The Labour courts were inundated with claims for higher wages but there was an absence of labour disputes.

The year began with a message from President Dutra, who expected a record budgetary deficit of £70 million, about half of which would consist of funds needed for financing the *Salte** plan to increase national production. *Salte* expenditure would cover health, food, transport and power. The development of transport was considered the principal key to economic progress, and this part of the budget provided for improvements in railways, roads, pipelines, harbours, river navigation, the merchant navy and airways. There were to be large investments in the development of hydro-electric power and in the exploitation of petroleum deposits and the building of refineries. Agriculture was to be encouraged and modernized. The campaign for better health would include measures for rendering the tropical regions habitable. The president recognized that the government could not indefinitely issue more money to meet the annual deficits. Already, living costs in the cities had doubled since 1945 and were four times as high as in 1939. Inflation in the past few years had had the effect of stimulating urban industry and the growth of cities, with a consequent decline in agricultural production. President Dutra hoped that the *Salte* plan would counteract this tendency. During 1950, however, inflation was unchecked. As in the past, Brazilian industrialists and merchants continued to over-price their goods, earning excessively high profits. After vanishing because of real or alleged scarcity, foodstuffs returned to the shops at inflated prices. Wages were moved upward.

By means of a stringent control of imports, and a substantial increase in exports, Brazil's commercial debt of $130 million to the U.S. was almost entirely liquidated by the end of the year. This satisfactory achievement was facilitated by the rise, during the first half of the year, of about 100% in the price of coffee, for which the U.S. was Brazil's principal customer. Great resentment was caused, however, by the publication of the report of a U.S. committee which, under the chairmanship of Guy M. Gillette, senator from Iowa, investigated the reasons for the rise in coffee prices. The Gillette report accused Brazil (and Colombia) of having speculated in coffee; recommended that E.C.A. funds should not be used for the purchase of coffee; and suggested that coffee sales should be subject to control and to a profits tax. Coffee prices remained firm during the second half of the year, and it was estimated that the world demand for coffee would exceed the available supplies in the immediate future.

Brazilian trade with Europe was greatly favoured by the spectacular rise in the world price of another important local product, cotton, which came into exceptional demand as a consequence of the outbreak of war in the far east and of the subsequent restrictions imposed by the U.S. government on the export of cotton. Many bi-lateral commercial agreements were signed, and extensive use was made of barter arrangements with other countries because of the lack of foreign currency. Trade was resumed with Japan for the first time since World War II.

Trade between Brazil and the United Kingdom was a disappointment to exporters in both countries. During the remaining term of the 1949 Anglo-Brazilian trade agreement, which expired in the middle of 1950, Brazil was unable to supply the total quantities of rice and sugar required by Britain, and Britain was unwilling to pay the Brazilian price for cotton with the result that the full quota was not taken up. Brazil therefore had an unfavourable trade balance with the U.K. and possessed insufficient sterling for the importing of British non-essential goods. On Sept. 18 the two governments exchanged notes establishing new trade schedules for the 12 months ending June 30, 1951. The notes provided for U.K. exports to Brazil to the value of £33 million and for

* The *Salte* plan for the development of Brazil over the period 1949-53 was approved in June 1948, the word *salte* being coined from the initial letters of the words *saude* (health), *alimentacão*, *transporte* and *energia*.

razilian exports to the U.K. totalling £51 million. The rincipal Brazilian exports were to be raw cotton (£18,650,000), offee, cocoa, timber, hides, rice and meat. The chief British xports were to be petroleum (£11,460,000), machinery for extile industries and passenger automobiles. The import f British textiles was strongly opposed by the local manu- acturers and a minimum amount of sterling was therefore llocated for this purpose. The volume of trade on either side as to be subject to agreement on price and quality and to ie maintenance of a reasonable equilibrium in sterling ayments. The British negotiators pointed out that one of ie main obstacles to an expansion of Brazilian exports to erling countries was the high price of local products because f the non-devaluation of the cruzeiro. In November the ritish chancellor of the exchequer announced that the razilian authorities were about to devote £10 million of eir sterling resources towards the liquidation of commercial ebts owing to firms in the U.K. and that Brazil hoped to ettle the remainder of those arrears early in 1951.

In the period Jan.-June 1950 Brazil had a favourable overall ade balance. Exports were Cr.$ 9,097 million and imports r.$ 7,966 million, the comparative figures for the same period 1949 being Cr.$ 8,156 million and Cr.$ 10,423 million.

In September the Brazilian government offered a sum of r.$ 50 million as the country's contribution to the war effort Korea. This sum was to be placed at the disposal of the .N. for the purchase in Brazil of exportable surpluses of odstuffs, raw materials or manufactured goods. The overnment emphasized that any offer of military assistance ould be impracticable because of the great distance sepa- ating Brazil from the scene of operations.

In July Brazil's wartime dictator, Getulio Vargas (*q.v.*), ccepted nomination by his so-called Brazilian Labour party Partido Trabalhista Brasileiro) to stand as presidential andidate in the October election. It had long been apparent iat Vargas was preparing a new bid for power, though the nly propaganda issued by his supporters was the slogan He will come back," plastered on walls throughout the ountry. Meanwhile " the father of the poor " (as he styled imself) had been living quietly in retirement in southern razil. Every rise in the cost of living increased his prestige nd he was aware that a majority of the poorer people, emembering the labour laws which he made during his ictatorship, would probably welcome his return. Vargas egan his new campaign in August, when he was cheered by uge crowds in São Paulo. He began his first electioneering eech with the cry: " Workers of Brazil!" and he promised iat, if elected, he would introduce more social legislation. here were rumours that the Brazilian Labour party was ceiving financial support from President Juan Perón of rgentina, but no evidence was produced to support these ssertions. Vargas duly defeated his three rivals at the polls n Oct. 3. The president-elect then made several statements n the policy that he would pursue during his five years in ffice. Regarding social welfare, he said:

" It has become necessary that a national, systematic plan be ndertaken to raise the nutritional and living standards of the working asses. Before anything else we must raise their purchasing power, crease the minimum wage, establish the worker on the soil and eate an organization which will handle all social welfare."

He drew the attention of all farmers to the need for intensi- ing agricultural production. He stated that he would repress the illicit gains of the speculators and the exaggerated rofits of 30% and 40% and correct the scandalous tax vasion." Vargas said that he was prepared to co-operate ith the U.S. " on condition that they help us to solve our roblems according to our own interests " and that he voured foreign investments " provided they come to o-operate in the development of our existent basic industries nd in the creation of new industries." He affirmed that under his government Brazil would continue to support the western nations. Vargas also announced that he intended to maintain the parity of the cruzeiro, and he added, in defiance of the Gillette report: " We must obtain from coffee the maximum of foreign currencies, selling it abroad at the best prices obtainable." (G. P.)

Education. Schools (1947): primary 58,502, teachers 112,412, pupils 4,336,437; secondary 1,004, pupils 302,000; industrial 213, apprentices 53,000; vocational 2,700, pupils 200,000. Institutions of higher education 305, students 25,000, professors 4,500; state universities 7; private (Catholic) universities 3. Illiteracy (1947): approximately 57%.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): coffee 1,341 (1,184); cotton 331 (369); rice 2,648 (2,980); maize 5,650 (5,700); sugar, raw value, 1,751 (1,732); cocoa 125 (161); tobacco 116 (118); beans 1,170 (1,245); cassava 12,610; nuts (1949) 32,109. Livestock ('000 head): cattle (Dec. 1948) 50,178; sheep (1948) 16,000; pigs (Dec. 1949) 23,881; horses (Dec. 1948) 6,928; chickens (1948) 60,000.

Industry. Registered industrial establishments: (1943) 80,633. Fuel and power: coal ('000 metric tons, 1949; 1950, six months, in brackets) 2,112 (930); consumption of gas in Rio de Janeiro and São Paulo (million cu. metres, 1949) 198; consumption of electrical energy in Rio de Janeiro and São Paulo (million kwh, 1949) 2,712; crude oil ('000 metric tons, 1949; 1950, six months, in brackets) 14 (16). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): pig-iron 499 (331); steel ingots and castings 608 (361); manganese ore (1948) 472; gold (fine ounces, 1949) 119,179. Manufactured goods: cotton piece-goods (million yards, 1948) 306·1; cement ('000 metric tons, 1949; 1950, six months, in brackets) 1,248 (623).

Foreign Trade. (Million cruzeiros, 1949; 1950, six months, in brackets) imports 20,648 (7,966); exports 20.153 (9,097). Main sources of imports (1949): U.S. 43%; U.K. 13%; Argentina 11%. Main destinations of exports: U.S. 50%; U.K. 9%; Argentina 8%. Main imports: machinery and apparatus (excluding vehicles) 26%, petroleum products 10%, wheat 9%, vehicles 7%. Main exports: coffee 58%, raw cotton 10%, cocoa beans 5%, hides and skins 3%.

Transport and Communications. Roads (1949): 64,294 mi. Licensed motor vehicles (Dec. 1949): cars 133,386, commercial 169,225. Railways (1949): 22,136 mi. including state railways 19,229 mi.; passengers carried (1948) 308·6 million; livestock (1948) 4·2 million; freight carried ('000 tons, 1948) 33,933. Shipping (July, 1949): number of merchant vessels of 100 gross tons and over 342; total tonnage 724,951. Air transport (1948): mi. flown 38 million; passengers flown 946,000; cargo and baggage carried 26,791 metric tons; airmail carried 712 tons. Telephones (1949): 484,300. Wireless licences (1945): 629,794.

Finance and Banking. (Million cruzeiros) budget: (1949-50) revenue 17,917, expenditure 20,727; (1950-51 est.) revenue 20,394, expenditure 21,356. Internal funded federal debt (Dec. 1948): 10,410. Currency circulation (June 1949; June 1950 in brackets): 18,050 (20,800): Gold and foreign exchange (million U.S. dollars, July 1949; July 1950 in brackets): 680 (609). Bank deposits (June 1949; June 1950 in brackets): 33,420 (36,990). Monetary unit: *cruzeiro* with an exchange rate of Cr.$ 52·42 to the pound and Cr.$ 18·72 to the U.S. dollar.

See B. H. Hunnicutt, *Brazil: World Frontier* (London, 1950).

BREAD AND BAKERY PRODUCTS. In 1950, for the first time since World War II, Great Britain saw some real relaxation of wartime regulations with respect to flour and bread. In the first place the official rate of flour extraction at last was reduced from 85% to 81% so that, with the admixture of imported white flour, bread was now made from flour of 80% extraction. This permitted a whiter flour to be made, although the colour was still inferior to that prevailing in prewar days. This in turn resulted not only in whiter but also in bolder and generally more pleasing bread: the baker had found it almost impossible to produce a really pleasing loaf of attractive size and structure with the low-grade dark flour prevailing when the extraction rate was 85%.

Thus the public could now have a whiter loaf and furthermore have it sliced and wrapped, if they wished. In fact bakers had claimed that bread sales were dropping very markedly now that other foods were in freer supply and that some improvement in bread quality was urgently wanted. Since the government's White Paper (issued in 1945) on the postwar loaf had suggested that nutritional requirements were likely to be met by an 80% extraction, an official instruction to mill to this length was the obvious step, as soon as the dollar position permitted it.

Good work continued to be carried out by the Research

Association of British Millers and by the newly formed Baking Industries Research association (both the flour milling and the baking industries had become scientifically minded); and similar research bodies were already functioning in other parts of the Commonwealth. Great interest centred round the substances used for maturing and bleaching flour; and a careful watch was being kept on the use of substances which appear to retard staling, generally known as " bread softeners." As fats became in freer supply, it was probable that bakers would revert to prewar practice and use a quantity such as 4 lb. a sack, which would make the loaf more attractive and more palatable. The lower extraction and whiter flour had also benefited the makers of cakes, pastries and biscuits, although with 80% extraction it was still impossible to produce articles as good as would have been liked.

A secondary but also important result of the reduced extraction rate was that a larger quantity of the by-products of milling (bran, sharps, etc.) could now be used to feed animals and poultry, which would allow more meat, poultry, eggs and milk to be supplied.

Of technical interest was the introduction of pneumatic conveying of the various stocks in flour mills; the use of a more precise method for judging and hence controlling flour colour; and the employment of new processes in the bakery to replace the time-honoured method of greasing baking tins. Finally, attention was being paid to cleanliness and hygiene in all food manufacture. This last reflected the publication of model by-laws for the guidance of local authorities. (*See* also WHEAT.) (D. W. K.-J.)

BREWING AND BEER. The downward trend in beer output from the peak production in 1945-46 continued during 1950. Although the number of standard barrels of beer produced for the first ten months of the year was 13,775,130 compared with 13,509,318 for the corresponding months of 1949, the number of bulk barrels was lower, being 21,035,241, as compared with 21,993,984. The cause of the decline was stated by R. H. Butler, chairman of the Brewers' society, at the annual banquet of the Allied Brewery Traders' association on March 20 to be the excessive beer duty. Such high taxation kept the price of beer at a level which beer drinkers could ill afford. He doubted whether it was realized that they were paying nearly four times as much in duty as in 1939. Similar protests were made on behalf of the retail section of the licensed trade. It was pointed out in particular that the duty on a pint of average strength was over 8*d.* making the price to the retailer 1*s.* 2*d.* Retailers considered that a reduction in the duty of 3*d.* or 4*d.* a pint was necessary if the downward trend in consumption was to be reversed.

The budget, however, brought no relief in the form of reduced duty. Instead, the chancellor of the exchequer asked the brewing industry to increase the strength of all its beers by three degrees. The duty was adjusted to enable this to be done without any additional duty being incurred. The effect of this was to bring the average strength of beer up from about 80% of its pre-war level to little over 90%. The provisional receipts from the beer duty in 1949-50 were £263,086,000 or nearly £4 million less than the estimate. The chancellor's estimate of revenue from the duty in 1950-51 was £253,900,000. An output of approximately 25 million bulk barrels would be needed to bring in this amount. This was roughly a million barrels less than the figure for 1949-50.

Exports to hard-currency countries increased slightly in 1949-50—from 69,000 standard barrels in the year ended Sept. 30, 1949, to 71,000 standard barrels in the following 12 months. Total exports, however, declined from 347,000 standard barrels to 344,000, the fall being mainly accounted for by decreased supplies abroad, to War Office hospitals and to naval, army and air force institutes.

Following the increase in the budget strength of all beers came a modification, a few weeks later, of the system of licences for barley and malt. Whereas brewers and maltsters had been obliged since the Malt (Restriction) order was made in 1940 to restrict their purchases to current needs, they were now licensed to buy barley or malt (or both in certain cases) without restriction as to quantity. The delay in bringing malting barley on to the market caused by the stormy weather at harvest time, combined with the removal of the maximum price limit, caused prices of the 1950 crop to rise to a disturbing extent. Although the crop was smaller than expected, there appeared to be no reason for assuming that there was a serious shortage or that it would be impossible to meet brewers' requirements in full.

The first permanent licensed house to be built or completely rebuilt since the outbreak of World War II was opened in January. This house, " The Fox," Felpham, Sussex, was rebuilt on the site of an old inn built in the first half of the 18th century and having associations with William Blake, the poet and painter. The new house bore much evidence of the progressive architecture and the high appreciation of craftsmanship characteristic of and implicit in the many fine new inns built by the brewing industry during the three previous decades. At the end of the year the completion of the roof and chimneys of the " Festival Inn," Poplar, London, was celebrated. This inn was built by the owners as part of the " Lansbury scheme " and of the " live " architectural exhibit during the Festival of Britain.

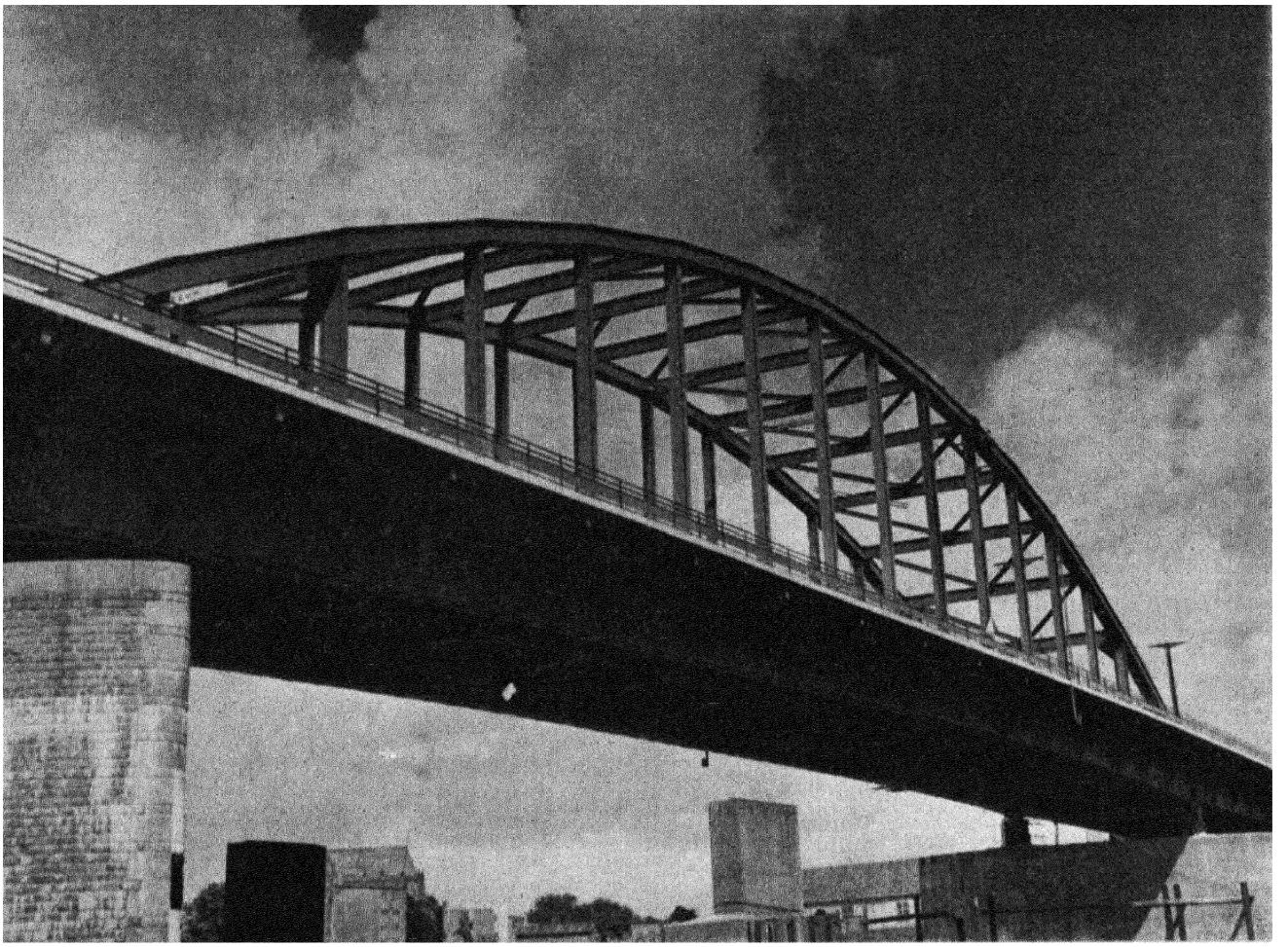
Brewers were almost the only manufacturers still operating on a local basis and among the very few who distributed their own product. There was no " middle man," generally speaking, in the licensed trade. As a result, the relations between the wholesale and retail sections had always been of a special character and particularly close and friendly. A practice of ironing out difficulties by free, if informal, discussion by representatives of both sides had existed for many years. During 1950, however, the trade reached a new objective by extending its system of local panels of wholesalers and retailers to cover the whole country. The primary purpose of the panel was to afford a ready means of discussion between the wholesaler and the retailer of all subjects of common interest. The panel could also arbitrate, when the need arose, in individual disputes.

The great ramifications of the brewing industry were shown at the Brewers' exhibition at Olympia, in London, during the first fortnight in October. A great range of brewing plant, much of it of a strikingly novel character, was displayed. Special interest was shown in new or improved machines for yeast rousing, motorized malt turning, racking, automatic bottle-crating, loading, filling, crowning, labelling, conveying, glass and cask washing and bottle cleaning and pasteurizing. The Bottled Beer competition, which in prewar days was an outstanding feature, was held again after a lapse of 11 years. There were 580 entries with a total of nearly 14,000 bottles. Nearly 100 entries came from the Commonwealth. (X.)

United States. Beer and ale sales in the United States for the fiscal year ended June 30, 1950, totalled 84,202,618 bbl., the third highest production on record for a fiscal year. The highest figure was 86,992,795 bbl. in 1948.

Bottled and canned beer accounted for 70·8% of the nation's total consumption, compared with a rate of about 25% in 1934 and prior years. Early in 1950 the results of a nation-wide consumer survey made in 1949 by Crossley, Incorporated, were published, which showed that 52·4% of the adult civilian population of the U.S. were consumers of beer and ale.

The brewing industry in 1950 enjoyed an abundance of raw materials—particularly malt, the basic ingredient, and



The new steel bridge over the river Rhine at Arnhem, Netherlands, which was opened in May 1950. The old bridge of similar design was destroyed in World War II during the attack by British airborne-troops in 1944.

corn, used as a malt adjunct. Purchases of agricultural products were estimated at nearly $300 million mainly for malt, corn products, rice and hops. Purchases of containers, labels and various items of supplies and equipment, and the cost of services and transport were also important contributions to the national economy.

The industry pay roll reached a peak in 1949, with weekly earnings for production workers averaging $69·25, as compared with averages of $53·57 for all foods and $54·90 for all manufactures.

Federal excise, at $8 a barrel, and special taxes on malt beverages for the fiscal year 1950 totalled $672,084,794, bringing the cumulative total since the end of prohibition (April 7, 1933) to $7,502,692,208. State and local taxes and licence fees in fiscal year 1950 were estimated at $215 million, raising the cumulative figure for that revenue to about $2,515 million. Combined public revenues since 1933 had thus passed the $10,000 million mark. (*See* also HOPS.)

(E. V. LH.)

BRIDGES. The policy of limiting the number of roads and bridges under construction was continued in Great Britain during 1950; and of the bridges constructed only a few are worthy of special note.

Construction was advanced on the viaducts to bypass Neath, in Glamorganshire, on the main road from Cardiff to Swansea. There were two bridges: the smaller consisted of 11 spans, with a total overall length of 970 ft.; the larger had 16 spans, with a total length of 1,610 ft., including a 300-ft. span over the river Neath, where the bridge was 90 ft. above the high-water level. Both viaducts were composed of plate girder spans with dual roadways each 22 ft. wide and cantilevered footpaths and cycleways on each side.

Progress was made with the structural steel-work required for a pontoon bridge to replace the similar structure which had served for 70 years as the approach from street-level to the Liverpool floating landing-stage: it was to carry two lines of heavy vehicular traffic, with footpaths on each side; the roadway was to float between two masonry walls and rise and fall with a maximum 30-ft. range of tide; and the pontoons towards the shore end would ground at low water on a paved ramp between the walls. The structure was designed to deal with tidal conditions and considerable wave action, while combining articulation with the maximum stability under moving vehicles. There were to be six pontoon rafts and seven suspended spans of 41 ft. 8 in.; the bridge would have a total length of 551 ft. 2 in.

A pioneer aluminium structure was completed for the North of Scotland Hydro-Electric board in connection with their Tummel Garry scheme. This was a lattice girder footbridge with a 172 ft. 6 in. main span and two cantilever end-spans each 69 ft. long.

Belgium. A bridge over the Meuse at Sclayn was opened to traffic by Auguste Buisseret, the Belgian minister of public works, on Feb. 10, 1950. This prestressed bridge, having two main spans of 206 ft. each, was an important engineering structure and also remarkably beautiful: duality has always presented great difficulty to the bridge-designer, and few bridges consisting of two equal main spans have an entirely satisfactory appearance.

Germany. Progress was made in the construction of a new bridge over the Port canal at Heilbronn, to replace the notable structure built in 1931 by the Wayss and Freytag company and destroyed in 1944. The design for the new bridge was like that of the old, but the constructional methods were based on more modern practice. The clear span was 351 ft., the width between parapets 41 ft.; there were four three-hinged arch ribs, prestressed by steel wires having an ultimate strength of 227,200 lb. a sq.in. (the amount of pre-stress in the wires was calculated to be approximately 125,000 lb. a sq.in.).

Portugal. Progress was made in the construction of the Vila Franca bridge over the Tagus. The bridge comprised five fixed spans of 102 m. each and had an overall width of roadway and footway of 12 m. The spans were of structural steel of stiffened arch-construction; the cost of the steel superstructure amounted to £480,000. The permanent steelwork was erected on a service span and floated into each opening in turn.

Sweden. Sweden had a large programme, including several structures of exceptional size and interest. Bridges on which progress was made included one over the Skuru channel at Skuru in the county of Stockholm. This had an overall length of 935 ft., a width of 80 ft. and a main span of 258 ft. The three principal spans were of reinforced concrete arch-construction.

The bridge over the bay of Lulefjärdin at Luleä was planned to have an overall length of 2,980 ft., a width of 43 ft., two spans of approximately 287 ft. and five spans of approximately 274 ft., with a large number of smaller approach-spans, as well as an opening channel of approximately 99 ft. clear width; the large spans were each to be carried by two bow-shaped lattice girders.

The bridge over Lake Mälaren at Hjulsta had a total length of 1,710 ft., a width of approximately 20 ft. 9 in. and 11 steel girder spans of approximately 125 ft.; there were also two navigation channels of about 115 ft. each clear width provided by means of a lattice-girder swing bridge.

Finland. The Rovaniemi bridge for the Finland state railways was nearing completion in 1950. It was to carry a road and a railway and to consist in the main part of three 70-m. continuous steel lattice-girder spans, with approaches of three 35-m. and four 16-m. spans.

Iceland. Pjorsa bridge was constructed with a stiffened steel arch-structure of 83-m. span carrying a 4·1-m. roadway.

Egypt. The new railway bridge over the Nile at Kafr el Zayat, on the main line between Cairo and Alexandria, was opened at the beginning of the year. It has six fixed steel girder spans each 70 m. long and a swing span 70 m. long; the piers and abutments were founded on caissons sunk under compressed air.

Gold Coast. Progress was made with the construction of a structural steel bridge to replace the Ancobra bridge on the Gold Coast railways. The main span was 170 ft., and the new bridge was so designed that traffic would in fact be stopped only for a period of three weeks while the old bridge was being dismantled and the new one erected.

Australia. Two bridges were constructed over the Swan River estuary, near Perth: one with an overall length of 737 ft., the other with an overall length of 380 ft., both with a deck width of 72 ft. 3 in. The individual span between the piers was 62 ft. in the shorter bridge and 61 ft. in the longer. The deck construction consisted of welded steel plate girders with square bars welded on to the top flanges to transfer the shear at the junction between the girder and the concrete deck slab, thus providing a composite structure in which the concrete slab provided the compression-flange of the girders (this resulted in a very large saving in cost).

New Zealand. Considerable progress was made during the year with an ambitious programme of construction. This included the Tuki Tuki bridge, with an overall length of 1,080 ft., consisting of 12 reinforced concrete girder spans of 80 ft., with two end-spans each of 60 ft. and a roadway width of 24 ft. Another fairly large bridge constructed was that over the Kokotahi river, having an overall length of 1,015 ft. and consisting of 13 reinforced concrete girder spans of 70 ft. and two end-spans each of 52 ft. 6 in. in length and 12 ft. in width. A new harbour bridge was projected for Auckland.

Thailand. Construction proceeded with three large bridges of structural steelwork. The Rama VI bridge was of cantilever construction and comprised two spans of 80 m., two spans of 100 m. and a central span of 120 m.; it was designed to carry a single rail-track, a 6-m. roadway and two footways 1·5 m. wide. Surat bridge comprised one span of 80 m. and two spans of 60 m., with accommodation similar to that of the Rama VI bridge, but with one footway only. Bandara bridge was of cantilever construction, comprising two spans of 80 m. and a central span of 100 m., with a single rail-track and a footway. (W. A. Fr.)

United States. The new $14 million suspension bridge of 2,800-ft. main span over the Tacoma narrows west of Tacoma, Washington, was opened to traffic on Oct. 14, 1950, to replace the slender $6·4 million structure that collapsed on Nov. 7, 1940, as a result of aerodynamic oscillations during a 42-m.p.h. wind. The piers were salvaged from the original construction and altered to support the new structure, which was widened to four lanes and was provided with deep stiffening trusses and slotted roadways. The new 2,800-ft. span is the third longest in the world. A 56-m.p.h. wind in June 1950 caused vertical oscillations of 42 in. in the deck of the 4,200-ft. span of the Golden Gate bridge at San Francisco, California. This was the largest amplitude oscillation recorded since motion-recording instruments were installed on the bridge in 1946.

Construction was speeded in 1950 on the $40 million Delaware River Memorial bridge near Wilmington, scheduled to open by July 1, 1951. The project length of 3½ mi.



The new road bridge over the river Meuse at Sclayn, Belgium, which was completed in 1950.

included a suspension bridge of 2,150-ft. main span.

Construction progressed in 1950 on the $44 million Chesapeake Bay bridge, 21,286 ft. long, connecting the east and west shores of Maryland near Annapolis. The structure includes a suspension bridge of 1,600-ft. main span and a through cantilever bridge of 780-ft. main span, in addition to smaller deck cantilever spans and simple truss spans, all to carry a two-lane roadway, 28 ft. wide. The foundations for the deep-water piers presented the most difficult problem, requiring a novel pier design and using 17,500 tons of steel H-piles, half as much steel as in the four-mile-long superstructure.

The $27 million Mystic River bridge, a two-level structure more than two miles long from Charlestown to Chelsea, Massachusetts, was completed in 1950. The main span is a through cantilever.

The Penrose Avenue bridge at Philadelphia, Pennsylvania, with a cantilever main span over the Schuylkill river, was constructed in 1949-50 at a cost of $12 million, to speed industrial traffic along the Delaware river below Philadelphia.

The new cantilever bridge over the Mississippi river at Memphis, Tennessee, carrying four lanes of highway traffic, was completed in Dec. 1949. It took 4½ years to build and cost $14 million.

The $6,880,000 four-lane highway bridge over the Mississippi river at East St. Louis, Illinois, was completed in 1950. The 964-ft. central cantilever span is the longest span over the Mississippi.

One of the biggest bridge-replacement jobs in the U.S. in 1950 was the construction of a modern railway bridge over the Ohio river at Cairo, Illinois, by the Illinois Central railroad at a cost of $6·4 million to replace a 60-year-old single-track bridge. (D. B. S.)

BRITISH ARMY. In 1950 began the revival of the army. During the transition years after the double victory of 1945 over Germany and Japan there had been the inevitable disorganization caused by demobilization. The army had difficulty in maintaining a strength sufficient to perform piecemeal the tasks still imposed on it in every quarter of the world.

The Communist aggression in Korea and the resolve of the United Nations to resist it brought a government decision at the end of August that the term of compulsory service under the National Service acts must be extended. Under the amended law national servicemen who were with the colours on Oct. 1, 1950, or were called up after that date had to serve for two years instead of for 18 months. By this extension of the term of national service the strength of the army in March 1951 and thereafter would be 55,000 higher than it would have been without it. A parallel increase was being obtained in regular service troops by substantial improvements in pay. From Sept. 1, 1950, the weekly rates for private soldiers, non-commissioned officers and warrant officers ranged from £2 9*s*. a week for the newly enlisted regular private to a maximum of £8 11*s*. 6*d*. a week for the warrant officer class I. On the same date commissioned officers received increases of pay, the initial basic rate of pay of the second lieutenant becoming 17*s*. 6*d*. a day and of a colonel on promotion £3 13*s*. The effect on recruiting of the pay increases was considerable: during September and October 7,500 men enlisted, double the recruitment rate in the corresponding period of 1949.

Other measures taken during the summer and autumn were: the recall to the colours of regular reserves, the total for the navy and the army being 356 officers and 7,018 other ranks; the suspension after Aug. 1 of release from service of regular officers wishing to retire, short service commissioned officers, regular other ranks (except those discharged on pension), men on short service engagements and



Men of the Argyll and Sutherland Highlanders seen at Lyneham, Wiltshire, on Sept. 15, 1950, before leaving by air for Korea.

men wishing to purchase their discharge on other than compassionate grounds; and the enlistment of short service volunteers for a term of 18 months. The formation was begun of a supplementary reserve. Its purpose was to have ready the specialists, either as individuals or in units, required to complete the national army as a balanced force. In December an appeal was launched for volunteers to join the S.R. which had vacancies in 130 trades and occupations.

In October, in consequence of the prime minister's policy statement in September, the War Office announced the revival of three famous divisions, the 3rd Infantry and the 6th and 11th Armoured. Commanders were appointed and headquarters set up. Two of these, the 3rd Infantry and the 11th Armoured, were to reinforce the British Army of the Rhine in Germany. In December a change was made in the organization of the 15 regional brigades to which all regular infantry regiments belonged for enlistment, training and the posting and records of soldiers. The use of one battalion in each brigade as a training battalion was discontinued and new brigade training centres were set up. The battalions so released became operational units, an addition of 15 regular infantry battalions to the field army.

The authorized strength of the army, after the presentation of supplementary estimates to parliament in December was 522,000. At Dec. 31, 1950, troops were on field service or garrison duty in Austria, Cyprus, east Africa, Germany, Gibraltar, Hong Kong, Korea, Malaya (incl. Singapore), Malta, Suez Canal zone, Trieste, British West Africa and the West Indies. In Korea the 27th Infantry brigade (1st battalion, the Middlesex regiment, and 1st battalion, the Argyll and Sutherland Highlanders) arrived from Hong Kong at the end of August and were at once engaged in the Pusan bridgehead. The brigade was later designated 27th Commonwealth Infantry brigade when completed by the arrival of a battalion of the Royal Australian regiment. In the first week of November the 29th Independent brigade (the Royal Northumberland Fusiliers, the Gloucestershire regiment, and the Royal Ulster Rifles) arrived from Britain. They, too, were soon in action. The 8th Hussars with armoured fighting vehicles and artillery, engineers, signals and other ancillary troops made the two brigades effective field formations. Centurion tanks went into action for the first time against

the Chinese Communist invaders. To Nov. 25, British casualties were 51 killed or died of wounds, 175 wounded and 5 missing. (*See* also ARMIES OF THE WORLD.) (H. W. LE P.)

BRITISH BORNEO. British-administered territories in Borneo consist of the colonies of North Borneo (including the island of Labuan) and Sarawak, and the protected state of Brunei. Areas: North Borneo, 29,387 sq.mi.; Sarawak *c.* 50,000 sq.mi.; Brunei 2,226 sq.mi. Pop.: North Borneo (1947 est.) 331,000, incl. 66,000 Chinese: Sarawak (1947 census) 546,385, incl. 691 Europeans and 145,158 Chinese (17·4%); Brunei (1947 census) 40,657. Language: various, Malay serving as a *lingua franca.* Religion: Moslem and pagan. *Administration.* North Borneo: governor; executive council, 3 *ex-officio* and 6 nominated members (2 official and 4 unofficial); Legislative Council, 3 *ex-officio* and 19 nominated members (9 official and 10 unofficial). Sarawak: governor; Supreme Council; Council *Negri* (legislature). Brunei: Sultan-in-council; general administration, other than matters affecting the Moslem religion, is conducted by the British resident. Governors: North Borneo, Sir R. Hone; Sarawak, A. F. Abell (also high commissioner for Brunei). British resident, Brunei: E. E. F. Pretty.

History. In both North Borneo and Sarawak 1950 opened with the appointment of new governors; in North Borneo Sir R. Hone succeeding Sir E. Twining and in Sarawak A. F. Abell succeeding the late Duncan Stewart who was assassinated in Dec. 1949. For this crime two Malay youths were executed and nine others sentenced to imprisonment. All were members of a small secessionist society. Sir Ahmed Tajudin, sultan of Brunei, died at Singapore on June 3 and was succeeded by his brother, Omar Ali Saifudin.

In North Borneo the first Legislative Council was opened in Jesselton on Oct. 31. On the same date an executive council was established. Previously the territory had been administered by the governor with an advisory council. In Brunei, also, steps were taken in political development by the appointment of six representatives nominated by the divisional councils to the Council *Negri* (the legislature). Steps were also taken to unify the judiciary of North Borneo and Sarawak and to constitute a joint court of appeal.

In both territories the heavy task of reconstruction after the wartime occupation by the Japanese was continued. Considerable progress was also made in surveying and promoting the development of natural resources. In Brunei the output of oil from the reconstructed fields continued to expand: it had reached over 3 million tons in 1949. Marshall aid funds (40,000 U.S. dollars) were made available to the Sarawak government for road development. With the high prices ruling for rubber, timber and other raw materials trade was buoyant throughout the area. In North Borneo the assessment of war damage claims was completed by September and payment of annual instalments of the awards started. R.A.F. aircraft, on training flights from Singapore to Borneo, helped to transport officials and parachuted supplies to remote inland villages.

Finance and Trade. Currency; Straits dollar ($1 = 2*s.* 4*d.*). Budget estimates, 1950: North Borneo, revenue $15,720,094 and expenditure $20,673,206; Sarawak, revenue $17,152,624 and expenditure $19,493,795. Principal exports: rubber, sago, oil (Sarawak 3,302,880 tons, 1949) and timber. Trade returns, 1949: North Borneo, imports $32 million and exports $38 million; Sarawak, imports $110 million and exports $188 million. (K. G. B.)

BRITISH COUNCIL. At the end of 1950, the British Council was represented in 36 foreign countries; in Australia, New Zealand, India, Pakistan and Ceylon; and in 20 British colonies. The council supplied material and services to the United States, Canada, South Africa and other countries in which it was not represented. In the United Kingdom it provided services for people from overseas through 26 offices and centres and 7 students' residences. During the year it ceased to work in Hungary, Czechoslovakia and Bulgaria because the governments of these countries made unfounded allegations about the nature of its activities and compelled it to close its offices and centres.

Grants-in-aid voted by parliament for the council for the financial year 1950-51, after allowing for estimated receipts of £366,000, were £3,233,700, made up of £2,226,000 for work in foreign countries, £826,450 for work in the Commonwealth and £181,250 for services for colonial students.

The council was represented on the United Kingdom delegation at the general conference of U.N.E.S.C.O. at Florence in June, 1950, when the chairman of the council, Sir Ronald Adam, was appointed a member of the executive board. It was also represented on the cultural committees of the Brussels Treaty Powers and of the Council of Europe, to act as the principal agent of the British government in the operation of cultural conventions between Britain and other countries.

For the year 1950-51, the council awarded 220 scholarships for study in the United Kingdom to graduates from 58 countries including, for the first time, Basutoland, India, Israel and Pakistan. Through the council 14 overseas countries awarded 55 scholarships to British students. In co-operation with voluntary organizations, the council developed a wide variety of services for the 4,000 British colonial students in the United Kingdom, for whose accommodation and welfare it became responsible on Jan. 1. In London, Hans Crescent house was opened as a residence for 200 and a cultural and social centre for all those in the London area.

The annual report of the council issued in September recorded that during the year to March 31 it arranged the studies in the United Kingdom of 3,419 people from overseas, 118 overseas lecture tours by British experts and 64 tours of fine art, book and other exhibitions; and sponsored 25 theatre and music tours, including those of the Sadlers' Wells ballet in the United States and Canada, and of the Stratford Memorial Theatre company in Australia. It sent 2,201 prints of educational and documentary films to 66 countries, and sponsored 27 recordings of British music and poetry.

(R. F. AM.)

BRITISH EAST AFRICA: *see* KENYA; SOMALILAND, BRITISH; TANGANYIKA; UGANDA; ZANZIBAR.

BRITISH EMPIRE: *see* COMMONWEALTH OF NATIONS.

BRITISH EMPIRE GAMES: *see* EMPIRE GAMES.

BRITISH GUIANA. British colony, on the northeast of the continent of South America between Venezuela, Brazil and Surinam. Area: *c.* 83,000 sq.mi. Pop.: (1946 census) 369,678, excl. *c.* 6,000 Amerindians in remote districts; (1949 est.) 414,306. Language: English, various East Indian languages also spoken. Religion (1946): Anglican Communion 85,329, Roman Catholic 43,474, Hindu 115,574, Moslem 29,351, other non-Christian, 3,055. Principal towns (pop., 1948 est.): Georgetown (cap., 82,563); New Amsterdam (11,930). Administration: governor; executive council, 3 *ex officio*, and 5 non-official members; Legislative Council, 3 *ex officio*, 7 non-official nominated and 14 elected members. Governor, Sir Charles Campbell Woolley.

History. Important developments in agriculture and forestry took place during 1950. It was announced in January that the Colonial Development corporation would undertake the exploitation of 500 sq.mi. of forest in the Bartica triangle. Later, the corporation started the erection of a $5 million sawmill. In May, the two U.S. experts who had studied the mechanization of rice production in the colony

reported that considerable expansion of the industry was possible. They believed that 368,000 ac. could be devoted to rice growing compared with the 77,000 ac. which were already being utilized for this purpose. Abnormal rainfall at the end of 1949 and the beginning of 1950 caused serious flooding in coastal lands and necessitated widespread relief measures. A serious blow to heavy industry in the colony came in August when Anaconda British Guiana Mines Ltd., announced its intention to suspend its gold mining exploration and development activities. At the end of the year, a commission headed by Sir John Waddington arrived in the colony to consider all matters connected with the franchise.

A revision of the colony's 10-year plan was made public in September. In submitting it to the governor, the economic adviser pointed out that of British Guiana's allocation of $12 million under the 1945 act, some $9 million had, in fact, been spent or committed so that only $3 million remained available for new schemes. In addition to this, however, British Guiana could count on drawing about $3 million from its accumulated general revenue surplus; and to this it was proposed to add $10 million by way of a new colony loan to be raised in 1951. Unfortunately, even this would not supply enough capital for proposed new or remaining schemes.

Finance and Trade. Currency: West Indian dollar ($4·80 = £1). Budget (1950 est.): revenue $20,881,728; expenditure $20,491,606. Foreign trade (1948): imports $50,927,886; exports $46,246,564. Principal exports: sugar, rum, bauxite, rice, timber, diamonds.

(P. H.-M.)

BRITISH HONDURAS. British colony in central America bounded by Mexico and Guatemala. Area: 8,867 sq.mi. Pop.: (1946 census) 59,220; (1948 est.) 63,148. Language: English, Spanish and Indian dialects. Religion: mainly Roman Catholic. Chief towns (pop., 1946): Belize (cap., 21,886); Stann Creek (3,414). Administration: governor; executive council, 3 *ex officio* and not more than 5 unofficial members; Legislative Council, 2 *ex officio* and 10 unofficial members. Governor, Sir Ronald Garvey.

History. The year opened in an atmosphere of political excitement as a result of the devaluation of the British Honduras dollar on Dec. 31, 1949, to the rate of $4·00 to the pound sterling. Previously, the local dollar had been at parity with the U.S. dollar and, alone among British colonial currencies, was so left when the pound sterling was devalued in Sept. 1949. This position proved untenable and the change in value was essential in the interests of the colony's economy. Owing to the traditional local dependence on United States sources of supply, the cost of living was bound to be adversely affected by such a change, but the United Kingdom government made a special grant of $450,000 for the year for subsidies to cushion the effects of devaluation, particularly for the poorer classes.

Devaluation, however, cleared the way for a greatly accelerated programme of development. The Colonial Development corporation, which had suspended all its plans between Sept. and Dec. 1949 had pressed ahead in 1950 with a number of schemes such as the building of a hotel in Belize, the production of lacatan bananas, a ramie project and an animal husbandry scheme. A number of commercial investors, both British and American, embarked on schemes for the production of bananas, coconuts, tannic acid, pineapples and citrus. The timber industry enjoyed a qualified revival, and, in particular, there was an export market in the British Caribbean colonies for all dressed pine of reasonable quality that could be produced. A partial hold-back on exports was, however, imposed by the government to provide for local needs. In the chicle industry, United States buyers were again taking all first grade gum that could be produced.

British Honduras was granted a sugar export quota of 25,000 tons a year by the United Kingdom government and plans were on foot for the development of sugar production to meet this quota. A preliminary sum of £50,000 was given to the colony by the United Kingdom government for this purpose. Several colonial development grants were made to British Honduras during the year. A development commissioner was appointed and a 10-yr. development plan was in the final stages of preparation. There were no significant developments in the dispute with Guatemala over British Honduras. The government of Guatemala maintained its closure of the frontier.

Finance and Trade. Currency: British Honduras dollar ($BH 4·00 = £1 sterling). Budget (1950 est.): revenue $2,630,617; expenditure $2,906,675. Foreign trade (1949): imports $5,990,264; exports $4,564,847. Principal exports: timber, chicle, grapefruit (fresh and juice).

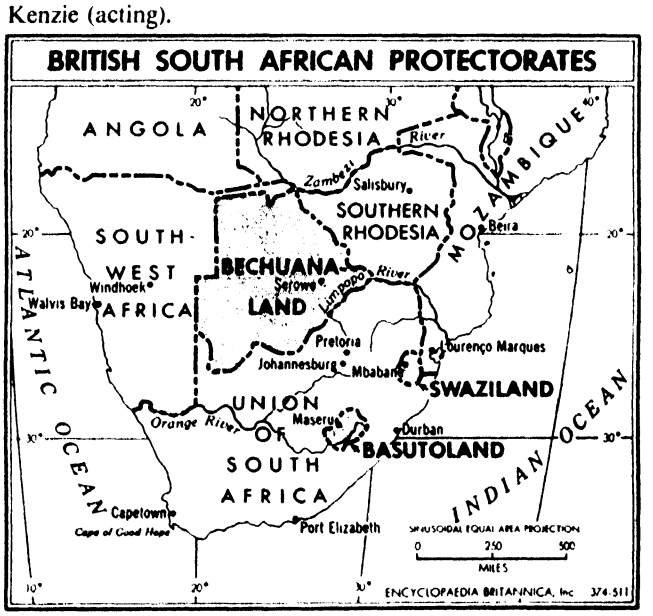
(P. H.-M.)

BRITISH LEGION: *see* EX-SERVICEMEN'S ORGANIZATIONS.

BRITISH SOUTH AFRICAN PROTECTORATES. The three territories in southern Africa which are not part of the Union of South Africa: Basutoland, Bechuanaland Protectorate and the protectorate of Swaziland, generally referred to as the High Commission Territories in South Africa.

	Area (sq.mi.)	Population (1946 census)	Capital
Basutoland . .	*c.* 11,716	560,000	Maseru
Bechuanaland .	*c.* 275,000	245,000	Mafeking
Swaziland . .	6,704	187,000	Mbabane

Administration: High commissioner for Basutoland, the Bechuanaland Protectorate and Swaziland (who is also high commissioner for the United Kingdom in the Union of South Africa) responsible to the secretary of state for commonwealth relations; resident commissioners in each territory. High commissioner, Sir Evelyn Baring; resident commissioners; (Basutoland) A. D. Forsyth Thomson, (Bechuanaland Protectorate) E. B. Beetham, (Swaziland) W. F. MacKenzie (acting).



History. *Swaziland.* An eight-year development plan for the territory framed in 1948 after an agro-economic survey was approved, and colonial development funds to carry it out were made available. Conservation of the soil and measures to prevent erosion formed a notable part of the plan. Negotiations were completed whereby the Colonial Development corporation purchased about 100,000 ac. of afforestable grassland in the high veld catchment area of the Great Usutu



The only natives of the Bamangwato who attended a meeting called in March 1950 by Sir Evelyn Baring, British high commissioner, to discuss the British government's decision regarding their chief, Seretse Khama.

river. This land was to be planted with suitable fast-growing conifers and in due time a large forestry industry would be established within the territory. For the first four years a sum of £1,177,000 was provided for the project.

Asbestos remained by far the most valuable export. In 1949 the 10-yr.-old Havelock mine exported a record total of 33,967 short tons of asbestos valued at £1,223,486. Nearly 20,000 head of slaughter stock valued at £258,069 were also exported.

The old advisory council of 10 elected Europeans received statutory recognition and was reconstituted. The system of native administration was reformed with the approval of the paramount chief.

Bechuanaland Protectorate. A disturbing event, which attracted much public attention within the territory and abroad, was the banishment of Seretse Khama (*q.v.*), chieftain-elect of the large Bamangwato tribe numbering 100,000. Acute controversy had arisen on his marriage in London to Ruth Williams. Eventually the United Kingdom government decided to withhold recognition of Seretse as chief for a period of not less than five years, during which he would not be allowed to live within the protectorate without special permission. Seretse visited his country in April but with his wife and daughter returned to England in June. A white paper (Cmd. 7913) was published explaining the reasons for the decision. The former regent, Tshekedi Khama, was also prohibited from living in the Bamangwato tribal reserve but he remained in the protectorate. For the immediate future direct rule was introduced but increasing responsibility was promised to a council of leading tribesmen.

Basutoland. Remarkable progress was made in the campaign against soil erosion which had become a grave threat in this mountainous territory. Of the £830,000 allotted to Basutoland for its 10-yr. plan of development one-third was earmarked for agriculture, more specifically for soil conservation. In the densely populated lowlands some 227,000 ac. had been terraced by the end of 1948 and in the mountains 203,000 ac. had been protected by grass buffer strips; in addition about 260 earth dams had been constructed to seal off gullies. Grazing control was successfully introduced and rigidly enforced by many of the tribal chiefs. Above 8,000 ft. the land was almost entirely given over to grazing for cattle, sheep and goats, the chief exports being wool and mohair. Because a considerable proportion of the cattle were of poor quality attempts were made to persuade the people to reduce the numbers and improve the strain. There was the usual annual exodus of 50,000 migrant labourers to work in the gold mines of the Witwatersrand. (J. LN.)

Education. Literacy estimates and schools for native children, with the numbers attending, were in 1948:

	Literacy	Primary	Intermediate	Secondary
Basutoland	32%	865 (79,437)	57 (6,730)	7 (871)*
Bechuanaland Protectorate	20%	147 (15,773)	5 (573)	1 (34)†
Swaziland	13%	173 (10,893‡)	4	3 (203)§

* Combined secondary and teachers' training. In addition one high school has 132 pupils, technical education is provided in two institutions and a small private university for Basutos, the students taking external University of South Africa degrees, is maintained by the Roman Catholic mission at Roma. † In addition one primary teacher training centre has 60 students and the Bamangwato tribal administration opened a large secondary school at Moeng. ‡ Total includes pupils in intermediate schools. § In addition a native trades school provides 4-yr. courses.

Schools for European children were maintained as follows in 1948: Basutoland 6 primary; Bechuanaland Protectorate 9 primary (225 pupils); and Swaziland 4 primary (520 pupils) and 3 secondary (68 pupils).

Finance and Trade. Currency: South African (£SA = £ sterling).

	Budget est. 1950-51		Foreign Trade 1949	
	Revenue*	Expenditure†	Imports	Exports
Basutoland	£882,065	£910,463	£2,244,117	£1,275,437
Bechuanaland Protectorate	456,355	469,452	1,314,733	1,159,868
Swaziland	452,095	471,364	‡	1,627,074

* Deficits of Basutoland and Bechuanaland met from accumulated surpluses. Grant-in-aid to be made to Swaziland by the United Kingdom to cover total deficits for 1943-50 of £42,495. † Excluding Colonial Development fund expenditure estimated for the year at: Basutoland £107,397, Bechuanaland Protectorate £119,282, and Swaziland £143,369. ‡ Swaziland is dealt with for customs purposes as part of the Union of South Africa and separate import figures are not available.

Principal exports: (Basutoland) livestock, grain, wool, hides and skins; (Bechuanaland Protectorate) beans, dairy produce, livestock, hides and skins, gold; (Swaziland) livestock, tobacco, asbestos (£1,223,486 in 1949), gold, groundnuts, tung oil.

BRITISH WEST AFRICA: *see* GAMBIA; GOLD COAST; NIGERIA; SIERRA LEONE.

BRITISH WEST INDIES. Under this heading are treated matters of common concern to the British West Indies, which comprise, in the normal official usage of the term, the island colonies of Jamaica, Leeward Islands, Windward Islands, Barbados, Trinidad and Tobago, and the two mainland colonies of British Guiana and British Honduras. Total area: 106,172 sq.mi.; total population: *c.* 3,025,000 (*See* also separate articles on the individual colonies).

Among the more important matters affecting the British West Indies as a whole during 1950 were the following:

In March, the report of the Standing Closer Association committee was published. The committee had, in effect, been considering the possibility of establishing a federation of all the British West Indian colonies; and its report was accompanied by a draft constitution of a federal government. The proposals were debated during the remainder of 1950 in the separate legislatures of the colonies and by other bodies. At the end of the year, Trinidad and the four legislatures of the Windward Islands (Grenada, St. Vincent, St. Lucia and Dominica) which are, in effect, separate colonies though they share a common governor, had accepted the report. The report of the Holmes commission on the unification of public services in the British Caribbean also appeared in March; and that of the McLagen commission on a customs union for the British West Indies at the end of the year.

The debates on federation did not prevent continued progress towards individual self-government in the different colonies. Events of importance in this field took place in the Leeward Islands, the four colonies of the Windward Islands,

and in Trinidad and Tobago (*q.v.*). Meanwhile, in default of a federal government, the Development and Welfare organization, which was set up under the terms of the first Colonial Development and Welfare act of 1940 and had its headquarters in Barbados, was made responsible for the holding of various conferences on a regional basis during the year.

Negotiations in London in the summer of 1950 ended in an agreement on the question of future purchases by the United Kingdom government of British West Indian sugar. In February, Princess Alice, Countess of Athlone, was installed as first chancellor of the newly established University College of the West Indies in Jamaica. But no record of the year would be complete without the comment that the chief subject of West Indian thought during 1950 was the triumphal tour of the West Indian cricket team in England which for the first time in history beat the mother country at her own game, in England. (P. H.-M.)

BROADCASTING. The formation of a European Broadcasting union was an important event in the field of zonal co-operation. This took place in Feb. 1950 at Torquay, England, when accredited representatives of the broadcasting organizations of 21 European countries pledged themselves to active membership of the new union. They were from Belgium, Denmark, Egypt, France, Greece, Ireland, Italy, Lebanon, Luxembourg, Morocco and Tunisia, Monaco, Norway, Netherlands, Portugal, Sweden, Switzerland, Syria, Turkey, the United Kingdom, Vatican City and Yugoslavia. Israel and Finland also took part but postponed any decision concerning adherence. Thus the democratic powers sank the differences which since the end of World War II had kept them divided into two broadcasting organizations and secured the co-operation of the most powerful single institution, the British Broadcasting corporation, which hitherto had held aloof. The eastern European broadcasters, though invited to Torquay, retired to Prague where they formed a body of their own, with which the E.B.U. declared its intention of maintaining friendly relations. The E.B.U.'s headquarters were at Geneva, with a technical centre in Brussels. Sir Ian Jacob, director of the B.B.C. overseas services, was the first president of the E.B.U. and L. Wallenborn, of Switzerland, the first director.

The Copenhagen wavelength plan which aimed at bringing order out of chaos in the air networks of Europe came into nearly complete operation in March despite earlier misgivings. The technical centre of the new union was quickly at work monitoring and reporting on conditions, more so later in the year when, in the normal course of events, interference became more apparent. As expected, Germany and Austria provided the chief difficulties, with Spain a close third. The U.S. had declined to accept recommendations in the plan so far as they affected the U.S. zone of Germany. The result was that there was broadcasting on 27 frequencies in that zone and on 9 in the other three zones. The long term effect of this might conceivably have been advantageous since all the broadcasting organizations in Western Germany and notably Nord-West Deutsche Rundfunk in the British zone were compelled to experiment with ultra-short waves, which were free from interference. By December, 20 such transmitters were operating and as many again were planned for 1951, although suitable receiving sets were few in number. The immediate effect of U.S. non-participation in the plan, however, was disastrous: it was estimated in Bonn at the end of the year that at least a third of the people in Western Germany could not receive a single native programme clearly and regularly. The case of Austria was also that of a country under four-power occupation, which involved multiplicity of programmes and the inevitable operation of a number of transmitters for the benefit of the occupying forces. Allocated four frequencies at Copenhagen, Austria continued to work on at least 13. Her central position and the grouping of her stations round the centre of gravity of European broadcasting made this divergence from the plan a serious one.

The other principal factor compromising the success of the plan was the position of Spain. For reasons thought valid at the time and supported by the majority of the delegates at Copenhagen, Spain was not invited to attend. Not unnaturally, she did not consider herself bound by the allocations made to her. With the coming of winter it became obvious that interference from Spanish stations was going to prove a source of nightly irritation to listeners throughout the Eastern coastal districts of England and Scotland.

Luxembourg, another non-signatory of the plan, continued to broadcast at high power on a long wave in a part of the waveband where very few assignments were available, and indeed increased its strength during the year. Its broadcasts, increasingly of a commercial character, were directed for the most part towards Britain but there was no evidence that the size of the audience was in any way commensurate with the money expended by the advertisers. These included English chocolate manufacturers, U.S. makers of detergents and international evangelistic missions. The problem of "wavelength piracy" was as old as European broadcasting itself. It was roundly condemned by the official bodies including the E.B.U. of which, incidentally, Luxembourg remained a member.

Other countries which did not sign the Copenhagen plan were eight in the middle east, including Turkey and Egypt. Slight interference from Turkey was noticeable towards the end of the year, but otherwise the position of these countries on the periphery of the European broadcasting area prevented their transmission from aggravating the aerial confusion.

A fully international conference on high-frequency broadcasting—with the exception of the U.S.S.R. and the eastern European countries whose representatives walked out of the first meeting because the Chinese Communist government was not represented—was held at Florence and Rapallo during the greater part of the year. After months of hard work and the exchange of a great deal of information it was finally decided that, since the demands so greatly exceeded the spaces available in the bands allocated to high-frequency broadcasting by the International Radio conference at Atlantic City in 1947, and in view of the international developments during the summer months, all work on plan-making should be discontinued. Though the conference expressed a pious hope that the conduct of such broadcasting should conform to principles and technical standards previously laid down, the plain and melancholy fact was that to prepare a universal high-frequency plan which would have had any chance of being applied was out of the question.

Great Britain. While waiting for the publication of the report of the Beveridge committee on the future of broadcasting and television, which was expected at end of Jan. 1951, the B.B.C. continued to experiment and to plan for the future both in programmes and in technical matters. In the Light programme vast audiences listened to hear poetry programmes introduced by the popular entertainer, Wilfred Pickles (*q.v.*), and in the same service children under five were offered, and eagerly accepted, a programme of their own, called "Listen With Mother." The outstanding successes of the Third programme were a series of talks by a Yorkshire and Cambridge mathematician, Fred Hoyle, on "The Nature of the Universe," and a full quarter's theme expressed in music, readings, drama and discussion, and devoted to "The Concept of Liberty." An outstanding event in the annals of radio drama was the production, in the Home service, of Louis Macneice's specially commissioned



Peter Brough and his dummy Archie Andrews, the stars of "Educating Archie," one of the most popular radio programmes of 1950, visiting the Charing Cross hospital, London, Oct. 1950. On right is Julie Andrews.

translation of Goethe's "Faust." For the first time more than 20,000 schools registered as listeners to the expanding courses of school broadcasts. In the overseas services, financed not by licence money but by the Exchequer, the year was notable for increased collaboration with Commonwealth broadcasting organizations, especially in the exchange of schools broadcasts either on discs or in script. The total amount of B.B.C. material carried on U.S. stations during the year was nearly 3,000 hr. including many drama and discussion programmes. "English by Radio" became a highly important "invisible export," for every week the overseas services broadcast more than 200 English lessons in 24 languages.

Europe. Insufficiency of funds still hampered a number of organizations. The French minister of state in charge of broadcasting announced in May that he was prepared to seek parliamentary authority for the introduction of advertising on the Chaine Parisienne. He hoped for an income of Fr. 400 million from such sponsored broadcasts. Little had been done on this by December. There was some talk also of a commercial station for Berlin which already had a surfeit of politically sponsored stations. Italian development was in a different direction in 1950: paying a compliment to the B.B.C., the Italian organization introduced a "Third" programme in October, its programme structure, of "Light," "National" and "Third," thereafter corresponding almost exactly to the British. The Italian "Third" ran for two hours each evening, offering perfect reception to a third of the listening population. The subject matter, it was declared, would be planned to bring to the microphone not only the world's inheritance of literary and musical masterpieces but also contemporary works showing the vitality of the modern art of writing for broadcasting. Poland's free university of the air was a somewhat similar project but with a more utilitarian purpose, with "The Theory of Dialectical Materialism" and "The History of Workers' Movements" as two of the ten courses which would cover a two-year study period. By the autumn 100,000 persons were listening regularly, many of them in groups organized by the trade unions. Many of the European countries increased their foreign-language broadcasts during the year, the barrage directed to Yugoslavia for instance from west and east alike reaching formidable proportions.

Commonwealth. As in Europe, finance caused much heart-searching in a number of the Commonwealth countries. The Canadian Broadcasting corporation's deficit for 1950-51 was estimated at $690,000, and a suggestion was made that the $2·50 licence fee be doubled. The report of the committee on broadcasting emphasized that increased commercial sponsorship would be against Canadian interests which were to maintain an essentially Canadian service. Ceylon, faced with the expense of building an independent service, resorted to advertising. South Africa sought to establish its commercial service, called Springbok radio, against the neighbouring competition of Lourenço Marques. Pakistan was hampered by the high price of sets. India, better organized as regards community listening, incorporated certain stations belonging to the former princely states, and the full network of 21 stations was put to the task of establishing Hindi as the national language. (X.)

World. There was no appreciable change in the number of radio broadcasting stations operating or under construction throughout the world in 1950, according to the best available estimates. These placed the total at about 6,500, including booster or relay stations but excluding television and frequency modulation (F.M.) stations. The number of radio receiving sets in use throughout the world was estimated unofficially at between 166 million and 171 million.

United States. Receiving sets in use in the U.S. were estimated at 90 million by O. H. Caldwell, editor of *Tele-Tech*. This represented a gain of 9 million over the 1949 total.

Stations. The year 1950 brought no spectacular expansion in the broadcasting field. The amplitude modulation (A.M.), or standard broadcast band contained little room for new stations after the unprecedented building programme of the first two years after World War II, when stations were added at the rate of about 500 a year. The public's failure to respond to frequency modulation (F.M.) broadcasting offered little incentive for entry into that field.

Figures published in *Broadcasting Telecasting Magazine* showed that 3,104 broadcasting stations—A.M., F.M. and television—were operating or had been authorized by the end of Dec. 1950. This figure compared with 3,138 a year before. Although the number of authorizations declined by 34 during 1950, the number of stations actually in operation at the end of the year, 3,014, was the largest in history. F.M. stations in operation were 676 against 743 a year earlier. Because of the Federal Communications commission's licensing "freeze," there was no change in the number of television station authorizations—109—but during the year the number in operation increased from 97 to 107.

GENERAL COMPOSITION OF NETWORK COMMERCIAL EVENING PROGRAMMES, THIRD WEEK IN OCTOBER, 1949 AND 1950.

	Percentage of time on the air	
Type of Programme	1950	1949
Mystery drama	23·4	21·4
Comedy	19·5	18·4
General drama	12·8	16·0
Quiz and audience participation	10·6	14·3
Popular music	10·6	10·1
Concert music	10·4	4·7
Variety music	7·2	9·4
Variety comedy	5·5	5·7

SOURCE: A. C. Nielsen, Co.

Transit and Subscription Radio. One of the most significant developments in the F.M. field was the growth of transit radio—the transmission of special programmes (usually music and news) to receivers installed in trams and buses—and related services such as "storecasting" and "factory-casting." Expansion of this type of F.M. operation continued in 1950 despite protests which seemed likely to require a ruling by the F.C.C. on the question of its legality. By the end of 1950, transport undertakings in 19 cities had subscribed to this type of service.

Broadcasting Revenues and Expenses. According to a report referring to 1949, issued by the Federal Communications commission in Nov. 1950, total revenues from A.M. operations increased 1·67% to $413,784,633. The report also showed that broadcast expenses reached $357,521,718, which, deducted from the gross revenue figure, left broadcast income totalling $56,262,915 before federal income taxes had been deducted. The F.C.C. report was based on information supplied by seven A.M. networks, their 27 owned and operated stations and 1,994 other A.M. stations, as compared with seven networks and 1,824 stations in 1948.

The four nation-wide and three regional networks and their owned stations accounted for $108,079,704 (26·12%) of the 1949 total revenues, and $17,473,756 (31·06%) of the net broadcast income before taxes had been deducted.

Manufacture. Preliminary estimates by the Radio-Television Manufacturers' association, representing more than 80% of the industry, placed production for 1950 as follows: home radio receivers, 8,002,500; car radios (11 months), 3,785,297; portable radios (11 months), 1,560,501. (*See* also RADIO, SCIENTIFIC DEVELOPMENTS IN; TELEVISION.)

(R. W. CR.; S. TF.)

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BROZ (TITO), JOSIP, Yugoslav statesman and soldier (b. Kumrovec, Croatia, May 25, 1892). The son of a blacksmith, he served as a private in the Austro-Hungarian army in World War I and in 1915 was captured by the Russians. A prisoner of war until 1917, he joined the Red army and fought with it against anti-communist Russian armies. In 1920 he was sent by the Comintern to Yugoslavia to organize the Communist party there. He was arrested many times, and in 1928 was sentenced to six years' imprisonment for conspiracy. On his release in 1934 he went to Moscow, and in 1936 was sent to Paris where he helped to organize the transport to Spain of volunteers for the international brigades. In 1937 he became secretary general of the Yugoslav Communist party and remained in the country. After the German attack on the U.S.S.R. he started guerrilla warfare in Yugoslavia. In the first months of 1945 all Yugoslavia was liberated and on March 7, 1945, Tito, who in the meantime had appointed himself marshal, became prime minister and c. in c. He visited Moscow in April 1945. In March 1946 he paid state visits to Warsaw and Prague, in Nov. 1947 to Sofia and in Dec. to Budapest and Bucharest, signing on each occasion a bilateral treaty of friendship and mutual aid. On June 28, 1948, the Cominform published a statement denouncing Tito for his " hateful policy in relation to the U.S.S.R." But from a correspondence between Belgrade and Moscow published later it was possible to learn that the real core of Tito's heresy was his brand of Yugoslav patriotism. " Even though we love the U.S.S.R. we cannot love our own country less," wrote Tito to Stalin on April 13, 1948. As the propaganda campaign of all Communist-controlled countries against Tito continued during 1949 to increase in violence, the Yugoslav leader was forced to make many public replies. In an interview with a U.S. Progressive party member, Tito asserted on Oct. 17, 1949, that if war came to the soil of Yugoslavia " it would be no isolated situation but a world war." In June 1950, at Prokuplje, Kosovo-Metohija province, he proclaimed that Yugoslavia was the only neutral country in the contemporary world. On Oct. 29, at Zagreb, he paid tribute to the U.S. government, which was helping Yugoslavia in its food crisis without imposing any political obligations.

BRUNEI: *see* BRITISH BORNEO.

BRUSSELS. Capital of Belgium. Area (city proper): 12·7 sq.mi. Population (city proper): (Dec. 31, 1939, est.) 189,036; (Dec. 31, 1948, est.) 185,112. However, what is described as Greater Brussels, comprises not only the old city but also 19 other *communes.* The total population of the whole area was 1,132,697 in Dec. 1939 and 1,296,687 in Dec. 1948. Burgomaster, Joseph van De Meulenbroeck.

Well-stocked shops, illuminated sky-signs and abundant new cars continued to illustrate the outward prosperity of the first western capital to recover from World War II. Restaurants, cafés and large stores, however, suffered from a relative scarcity of customers. Restoration of the tower of the Palais de Justice, burnt by the Germans, was completed. Work on the junction railway connecting the reconstructed north and south stations neared its final stage with the building of a third, central station. Widening and concreting of trunk roads to Ghent, Ostend, Louvain and other centres proceeded, though no improvement could be observed in the pot-holed *pavé* general in Brussels. The last open section of the river Senne was covered in, and new exhibition buildings erected for the Brussels International fair.

In the referendum on March 12 upon the royal question, Brussels showed a vote against the king's return of 417,400 (51·83%) and 387,914 for him. An anti-Leopoldist tram strike on March 24, despite some wilful damage to vehicles, was only partly successful. At the general election (June 4) the pro-Leopold Social Christian (Catholic) party with 39·75% of the votes in the Brussels district obtained 13 seats in the Chamber, Liberals 6, Socialists 12 and Communists 1. On July 850,000 anti-Leopold Socialist and Liberal demonstrators, led by three ex-premiers, marched through Brussels, nominally in honour of the regent. King Leopold's return on July 22 attracted many sympathizers with offerings of flowers to Laeken palace and one ugly counter-demonstration. Between July 28-31 anti-Leopold processions, serious strikes and riots took place in which café chairs and tables were hurled across the Place Rogier, newspaper offices and vans attacked, shop-windows smashed and counters looted, and an attempt made to erect barricades near the Hôtel de Ville.

A meeting of the foreign ministers and defence ministers of the North Atlantic treaty powers was held in Brussels, Dec. 18-20. (H. D. Z.)

BRUSSELS TREATY: *see* WESTERN UNION.

BUDGET, NATIONAL. The year 1950 might well prove to be the turning point in the postwar budgetary trend in Europe, the Commonwealth and the middle east. The first half of the year was characterized by continued progress almost everywhere towards budgetary equilibrium. Countries which had succeeded in balancing their budgets during earlier years maintained this position. Countries which had earlier shown substantial surpluses of expenditure made progress towards reducing their deficits. In particular, France and Italy which had struggled since World War II with chronic budgetary deficits of a considerable size made good progress.

This almost universal improvement took place in spite of the effect of the series of devaluations of 1949 on the budgetary situation. These devaluations did not appear to have produced any material adverse effect on the budgets. The price rises they provoked during the first half of the year were moderate. In most cases increases of expenditure lagged behind. On the other hand the revenues benefited by higher prices and earnings due to devaluation. Indeed, the profit made on the revaluation of the gold reserves came as a welcome windfall to finance ministries. They could not use

these book-keeping gains to offset deficits in their current budgets, but in a number of instances the capital gains were used for investment expenditure which would otherwise have had to be covered by means of borrowing.

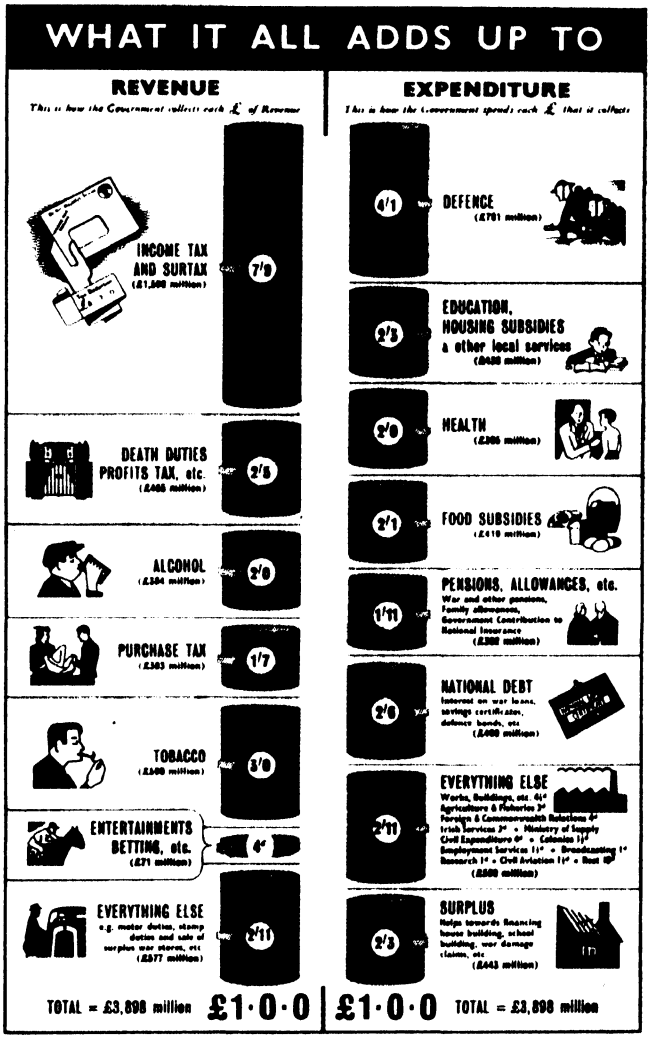
The budgets for 1950 or 1949-50 showed surpluses in the case of Great Britain, Switzerland, Spain, Denmark, Iceland, Canada and Pakistan, among others. Deficits continued to prevail in Italy, France, the Netherlands, Greece, Turkey, Egypt and Israel. The Netherlands was able to reduce its deficit because military expenditure was reduced after the transfer of sovereignty in Indonesia. On the other hand, France continued to bear the burden of its military commitment in Indo-China which cost Fr. 200,000 million. Greece, too, had to maintain large forces, and her expenditure on these and on refugees represented a third of her budget. Israel continued to spend unspecified amounts on her army in addition to £I 10 million included in the ordinary budget. Although military expenditure in Egypt had decreased during the previous two years, her postwar budget surpluses gave way to deficits both in 1949-50 and in the estimate of 1950-51.

Of countries under review it may be said that the year 1950 was characterized by a remarkable degree of budget stability. Nevertheless, the outlook underwent a complete change towards the middle of the year. As a result of the invasion of Korea it became evident that all western countries would have to increase considerably their military expenditures to make good the deficiencies in their national defences. The example set by the United States in deciding upon a vast rearmament drive was followed to some extent by most of them. Decisions were taken in the third quarter of the year, and steps were taken to implement them.

Until the middle of 1950 it had been the fashion to economize in arms expenditure whenever budget economies became imperative. Although some countries with immediate military commitments, such as Great Britain, France, Greece, Israel and the Arab countries spent a great deal on standing armies maintained for actual military operation, very few were prepared to sacrifice their prosperity for the sake of safe-guarding themselves against possible aggression in the more distant future. Turkey was an exception, owing to the geographical proximity of the source of the potential danger. Switzerland was another country which took its national defences seriously without, however, having to sacrifice its butter for guns. Nearly everywhere else requirements of social services and capital investment prevailed over those of national defence. Rather than to cut social expenditure or public works, many finance ministers preferred to cut military expenditure. This tendency had continued for years, notwithstanding the periodically repeated international tensions.

After the invasion of Korea most governments appreciated the necessity of spending more on armaments. Great Britain decided to spend £3,600 million in three years. France included in its budget Fr. 650,000 million and even small countries such as Denmark provided appreciable amounts. Among the Commonwealth countries, Australia's peacetime expenditure on defence was raised to £A 133 million, of which £A 50 million was for stock piling. This represented a substantial proportion of the budget of £A 738 million. New Zealand devoted one-tenth of its budget expenditure to defence. Canada expected to spend $1,000 million on defence in the financial year. In all these instances, however, the immediate expenditure was likely to be small because it would take some time before armament programmes got into their stride.

Countries which had succeeded in restoring their budgetary equilibrium were determined to maintain it in spite of their armament programmes. Great Britain decided that any additional expenditure on national defence must be financed out of additional revenue, as did some other countries.



The British budget for 1950-51 as shown in pictorial form in a pamphlet issued by the government.

There was no need, however, for Britain to introduce an autumn budget because, notwithstanding the larger expenditure on defence, there appeared to be no indication of a deficit. Other countries, too, found it easy to cover immediate military expenditure out of current revenue. Nevertheless, it was evident that in some instances the reappearance of deficits because of armaments was merely a question of time and that as soon as arms production was raised to the levels that had been planned it would become difficult to cover its cost without unbalancing most budgets.

This need for additional military expenditure was all the more deplored, as public expenditure had tended in the immediately preceeding years to become more stable. There had been a good chance for the decline of its importance through the steady increase of national incomes. Some countries such as Italy, the Netherlands and Switzerland succeeded in reducing the actual amount of expenditure to an appreciable extent. In some cases this was done mainly by reducing or abolishing subsidies. Several governments decided that for the sake of reducing expenditure it was worth while to accept the increase in the cost of living that followed from the reduction of subsidies. This was done in particular in Switzerland; also in South Africa where £1 million was saved by the abolition of the butter subsidy. Iceland abolished subsidies on exports but introduced a new subsidy on meat.

But in some other countries the trend of subsidies continued upward. The Australian government granted new subsidies

on imported coal and prefabricated houses, also on woollen goods consumed in Australia. After devaluation both Sweden and Norway had increased their subsidies. In Norway the new or increased subsidies were drastically cut in April, and in Sweden it was intended that they should be cut in 1951.

In many countries the practice of having separate budgets for current and capital transactions was maintained. In most instances it served to camouflage deficits. The superficial observer was apt to be satisfied with being told that the ordinary budget was balanced, without troubling much about the extraordinary budget. Yet the latter was sometimes very large. For instance, in Israel the ordinary budget was £I 56 million and the extraordinary £I 65 million. Although certain extraordinary revenues were earmarked by various countries to cover extraordinary expenditure, a large part of that had to be covered by borrowing. In Iceland a capital levy and a special tax on certain exports were imposed to provide funds for capital expenditure and for the compensation of certain categories of savings on depreciation of the currency.

Although in some countries it was possible to reduce the public debt, in most it continued to increase, even in countries which had an overall budget surplus. The increases occurred partly because of nationalization and partly because of the effect of devaluation on external debts. Nor was it possible during the year to make further savings through conversion operations. The trend of interest rates was, if anything, upward, though their level remained low. In some countries interest rates were deliberately raised as an anti-inflation expedient. These increases did not at once produce any appreciable effect on the burden of the public debt. Nevertheless, they foreshadowed the possibility of further increases in the debt charges when existing loans fell due and had to be replaced.

Throughout the countries under review ambitious investment programmes continued to be applied, but in some instances they had to be curtailed, at first for the purpose of improving the balance of payments and later as a result of rearming. Much of this investment was financed out of counterpart funds, representing the equivalent of Marshall aid in the national currencies of the recipient countries. Under their agreements with the United States this had to be set aside for special purposes. In Great Britain the money was mainly used to reduce the floating debt. In Norway it was used to reduce the government's debt to the central bank. On the other hand, in France, Austria and Greece it was used mainly for investment expenditure.

In Austria Sch. 300 million of capital expenditure was provided in the ordinary budget and Sch. 1,076 million in the extraordinary budget. There was a noteworthy increase of public works expenditure in Belgium to counteract growing unemployment. It had to be financed mainly by borrowing. Although France increased her capital expenditure, much of it was covered by the surplus of the ordinary budget and by counterpart funds. In Ireland capital expenditure was covered by loans. A remarkable increase in capital expenditure in Egypt was largely responsible for the budget deficit. Expenditure on social services continued to increase in most countries. In Britain efforts were made to check the rise in the cost of the national health service which nevertheless continued.

In several countries the deficits of nationalized industries contributed towards the increase in public expenditure. In Great Britain these deficits were left outside the budget and were allowed to accumulate in the hope that they might be covered out of future surpluses in these industries. Nevertheless, there was an unmistakable pressure in favour of adopting the principle that nationalized industries should be subsidized out of budget resources. In France they represented a considerable proportion of the budget expenditure and it had been suggested that to balance the budget some of the nationalized industries should be handed back to private owners. This appeared, however, to be politically impossible.

Notwithstanding progress made towards budget equilibrium the situation in Europe remained far from sound. For one thing, in most countries the equilibrium had been reached at a too high level. Abnormally high taxation had to be maintained until such time as an increase of the national income made it possible to reduce the rate of taxation while maintaining a high yield. Unfortunately, the chances were that long before that stage could be reached expenditure would increase further. There was, indeed, in Britain and elsewhere a distinct tendency to use any increase in revenue due to higher production and higher prices to make additional expenditure.

Another weak spot in the European budget situation was that the receipt of Marshall aid had made it appear more favourable than it really was. Although the counterpart funds could be used for current budget requirements the possibility of their use for debt repayment or investment expenditure released other funds for current spending. It was fortunate that budget equilibrium had been achieved or approached by the time of the devaluation and of rearmament. Had these two factors begun to operate some years earlier they would have gravely disorganized the budgets: they would have caused a further widening of the substantial deficits to such an extent as to discourage any serious effort to restore equilibrium.

The situation compared favourably with the corresponding period after World War I. In 1923 the budget situation in Europe was chaotic. There were large deficits in most of the former belligerent countries, and even some neutrals managed to unbalance their budgets. Inflationary financing reached its climax in Germany in 1923, and the budget position in France was very grave. In 1950 both the German federal republic and France approached stability, notwithstanding their immense problems of reconstruction. There could be no doubt that the governments had learnt a great deal since the early 1920s in the matter of dealing with budget deficits. The budget figures published by the U.S.S.R. and the Communist countries of eastern Europe claimed that in that part of Europe, too, budget equilibrium was maintained in 1950.

(P. EG.)

United States. The U.S. budget submitted to congress by President Harry S. Truman on Jan. 15, 1951, for the fiscal year 1952 recommended expenditure of $71,594 million. These recommendations represented a substantial increase over the estimated expenditure for fiscal 1951 of $47,210 million. On the basis of existing tax laws, it was expected that revenues in fiscal 1952 would total $55,138 million in contrast to the total of $44,512 million that was estimated for the fiscal year 1951. Expenditures and revenues for the fiscal year 1952, as presented in the budget, would result in a deficit of almost $16,456 million. Truman stated that he would recommend new tax legislation to congress which would at least balance the budget. The substantial increase that was projected in the budget reflected the rising trend of the rearmament programme that was undertaken after the outbreak of war in Korea. The president stated that it was "one measure of the vast new responsibilities thrust upon the American people by the Communist assaults upon freedom in Asia and the threats to freedom in other parts of the world." The need for rearmament had already caused a large rise in the budget for the fiscal year 1951 as compared with the recommendations originally made for that budget. Expenditures were almost $5,000 higher and revenues more than $7,000 million higher than originally expected. The increase in expenditure was entirely for national defence purposes; and the increase in revenue came largely from

SUMMARY OF UNITED STATES BUDGET RECEIPTS AND EXPENDITURE, FISCAL YEARS 1950-52 (in $ million).
(Details do not necessarily tally with totals because of rounding)

	Actual 1950	Estimate 1951	Estimate 1952
Receipts			
Direct taxes, individuals	18,115	22,309	26,780
Direct taxes, corporations	10,854	13,560	20,000
Excise taxes	7,597	8,240	8,222
Employment taxes	2,892	3,774	4,984
Customs	423	600	620
Miscellaneous	1,430	1,325	1,333
Deduct:			
Federal old-age and survivors insurance trust fund	2,106	2,960	3,823
Medical care insurance fund	—	—	275
Refunds	2,160	2,336	2,703
Total	37,045	44,512	55,138
Expenditure			
Military services	12,303	20,994	41,421
Veterans' services and benefits	6,627	5,746	4,911
International security and foreign relations	4,803	4,726	7,461
Social security, welfare and health	2,213	2,520	2,625
Housing and community development	261	409	102
Education and general research	114	143	483
Agriculture and agricultural resources	2,784	986	1,429
Natural resources	1,554	2,117	2,519
Transportation and communication	1,752	1,970	1,685
Finance, commerce and industry	227	368	1,524
Labour	263	212	215
General government	1,108	1,252	1,351
Interest on the public debt	5,817	5,722	5,897
Reserve for contingencies	—	45	175
Adjustment to daily Treasury statement basis	330	—	—
Total	40,156	47,210	71,594
Excess of expenditure	3,111	2,698	16,456

higher rates on the individual and corporation income taxes and from the enactment of a new excess-profit tax.

The bulk of the projected increase in the budget was for the purpose of providing expanded military services. Expenditure for fiscal 1952 for the Department of Defence was estimated at more than $41,000 million as compared with actual expenditure in fiscal 1950 of $12,303 million and estimated outlays in fiscal 1951 of $20,994 million. The president noted that expenditure for military research and development amounted to nearly $1,000 million. The other significant item included in military services was the stockpiling of strategic and critical materials. Outlays for this purpose were projected at $1,300 million, as against $438 million in 1950.

The other increase of large magnitude in the projected budget was for the function of international security, consisting largely of military and economic assistance. Expenditure for this purpose was projected at $7,461 million, as compared with the outlays of approximately $4,803 million and $4,726 million in the two preceding fiscal years. This increase reflected the obligations that were undertaken under the North Atlantic treaty, which provided for military assistance to the European nations that organized to strengthen the defence of Europe. Whereas the outlays in 1950 and 1951 were largely directed toward economic assistance, the programme for 1952 would be primarily orientated toward military assistance.

In addition to the aid to be supplied in the west, the economic assistance programme in Asia was to be expanded. The programme included assistance to Indonesia, Indo-China, Burma, Thailand, Formosa, the Philippines and Japan, and the president stated that aid might have to be extended to other Asiatic countries.

Changes in the remaining budgetary programmes were all of smaller size than those for national defence and international aid. The largest decrease was that projected for the services and benefits to veterans. Outlays for 1952 were estimated at $4,911 million, as compared with $5,746 million in 1951 and $6,627 million in 1950. Although the coverage of the social security and public assistance programmes had been substantially enlarged in 1950 to include about 10 million additional persons, the president estimated that expenditure for all social security, welfare and health programmes would increase by only $105 million.

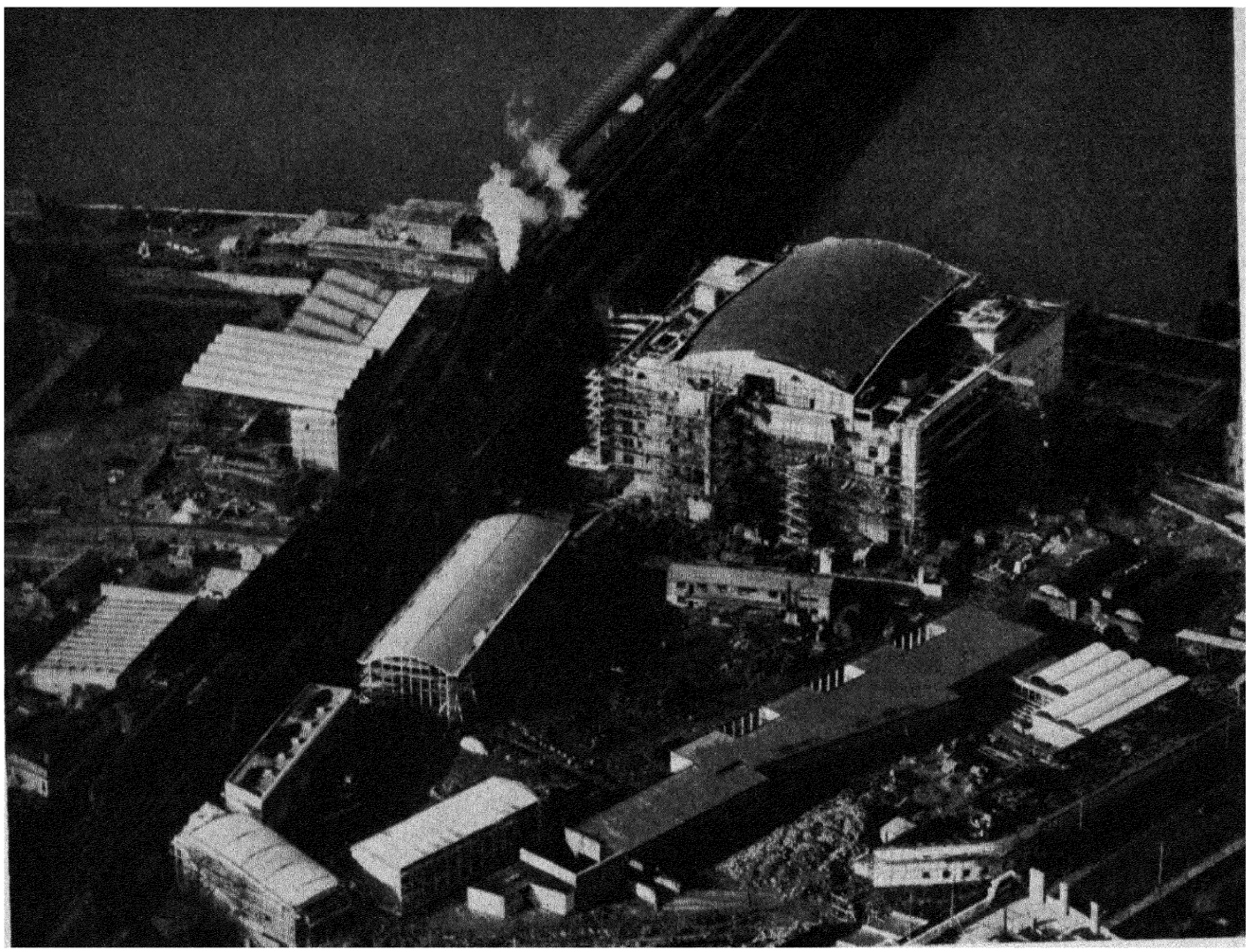
A budget increase for agriculture was projected from a level of $986 million in the fiscal year 1951 to $1,429 in 1952. Estimated expenditure in 1951 of $2,117 million on natural resources was expected to increase in 1952 to $2,519 million. The increase was largely explained by the expanded activities of the Atomic Energy commission which were to rise from $818 million to $1,277 million. An increase in requirements for the merchant marine of $164 million that was to be more than offset by a reduction in the deficit of the postal service by almost $500 million. (*See* also TAXATION; WEALTH AND INCOME, DISTRIBUTION OF.) (M. GT.)

BUENOS AIRES. Capital of the republic of Argentina, the largest city in the southern hemisphere and of Latin America, and the largest Spanish-speaking city in the world. Area (federal district): 71 sq.mi. Pop.: (1917 census) 1,576,597, (1947 census) 3,000,371.

Life in Buenos Aires was busier and more expensive than ever before. Political rumours, celebrations in honour of the regime and distributions of largesse by President Juan Perón's wife increased. In October the fifth anniversary of *Peronismo* was treated as a workers' festival, and on Oct. 17 a " torch of social justice " was lit at the Ministry of Labour. Throughout the year prices seemed to be constantly ahead of wages, which were continually being raised as the result of strikes. Omnibuses, trams and taxis needed repair and replacement and were inadequate for the requirements of the population. At central points in the city, awnings, inscribed with the name Eva Perón in large letters, protected the queues of urban workers who waited, in sun and rain, for public transport to take them home. The luxury shops lacked imported goods but were well supplied with locally manufactured substitutes. In this centennial year, portraits of the national hero, General San Martín, adorned almost every shop window and hung in every office in the capital. A bust of San Martín was carelessly broken by an assistant master at the principal British boys' school, St. George's college, and in consequence a government representative was appointed to investigate the school's organization and curriculum. One of the outstanding artistic events of the year was the visit of Sir Malcolm Sargent, who conducted the chief Buenos Aires orchestras. There were shortages of many basic commodities, such as milk and newsprint, and of housing accommodation. Large blocks of flats for lower-paid workers were constructed on the outskirts of the city. (G. P.)

BUILDING AND CONSTRUCTION INDUSTRY. Against a background of international unrest and rising expenditure on armaments, hopes of an expansion of British building activity were lower in 1950 than at any other time since World War II. Construction of dwellings continued substantially at the same rate as in 1949; and there was some easing of the restrictions which governed the amount of building permitted to private enterprise in proportion to that undertaken by local authorities. Builders generally continued to complain that local authorities did not fully exercise their powers in this respect and to point to the whole procedure of licensing building operations as a major cause of low output.

Material supplies were still not altogether satisfactory, a



An aerial view, taken in Nov. 1950, of the site of the Festival of Britain 1951. In the centre is the permanent Royal Festival hall. All the other buildings were to be removed after the exhibition.

shortage of cement occasioning some anxiety in the early summer. Official planning moreover appeared not to have considered sufficiently that the total volume of building which could be completed in a year was uncertain in so far as it would be effected by the weather. This served to indicate the narrowness of the margin surrounding the activities of the industry; and when the Conservative party recommended a 50% increase in the housing target, it was felt by many that such a promise had little hope of achievement.

Schemes for incentive payments continued to attract a good deal of attention, although the operatives' representatives still claimed that such schemes were introduced far too seldom and by too few employers: more than one enthusiastic employer claimed that prewar output could be achieved by them, but it was generally seen that the application of such schemes outside a limited range of trades and operations was exceedingly difficult.

Recruitment to the skilled trades, particularly to the trowel trades, bricklaying and plastering, was most unsatisfactory. A study of the industry led to the estimate that the total apprenticeship force should number about 22½% of the skilled labour force. But a census carried out by the Ministry of Works during 1949 showed that the proportion of young employees in the skilled trades was less than 14%; and in the north of England, where figures were generally above the average, it nevertheless appeared that employers were refusing to accept responsibility either for comprehensive training or for continuity of employment. Nor was it only the disinclination of employers that was responsible for low recruitment figures: in spite of many efforts to publicize the advantages of apprenticeship in building and the opportunities which it offered, it found little favour with boys in general or with their parents (a disability which it shared with other manual occupations). All sections of the industry continued however to show great interest in technical education; and the number of students taking organized courses of one sort or another was probably greater than ever before. The appreciation of the value of technical education at the highest levels had its influence on the recruitment and training of prospective administrators and executives; and after the successful experiments in foremanship training there was a noticeable quickening of interest in education for management.

In the field of research and development, the Building Research station took over the chief scientific adviser's division of the Ministry of Works. This brought to an end what many had long regarded as an anomaly, namely two official research bodies dealing with overlapping problems. The Building Research station continued to wrestle with the problem of communicating its findings to the industry, apparently with increasing success.

During the postwar period a number of the larger contracting firms had organized testing and research units, usually concerned with a well-defined section of work, such as foundations. By 1950 at least one firm had a laboratory investigating a considerable range of constructional problems

and making a valuable contribution to the total volume of such work. In spite of day-to-day difficulties building expenditure formed the greatest part of capital investment.

The year 1950 saw the publication (1) of the report of the working party set up by the Ministry of Works in 1948; (2) of the report of the Anglo-American Productivity team which had been in the U.S.A. in 1949; and (3) of the recommendations for nationalization prepared by the executive committee of the National Union of Building Trades Operatives. (D. A. G. R.)

United States. Construction in the United States in 1950 achieved such proportions as to make meaningless all previously held concepts of a boom year. Dollar volume for building of all types reached a total of $27,715 million, a gain of 22·7% over the 1949 record year, and home building soared to 1,395,600 new dwelling units which was 36% greater than the record-breaking 1,025,000 total of the preceding 12-month period. Home building attained a volume of almost $12,500 million exclusive of farm construction and accounted for more than 40% of the year's total building.

The outbreak of hostilities in Korea at mid-year modified the pattern of construction activity but not the pace. Late in October the newly constituted National Production authority prohibited the building of theatres, race tracks, bowling alleys and a long list of other types of places of amusement and social gathering, unless specifically authorized by the N.P.A.

Government expenditure for new construction amounted to $7,067 million and was almost 11% higher than the previous year but it was much smaller than private outlay, which totalled $20,648 million or 27·4% more than the comparable figure for 1949.

The physical volume of new construction was greater than the preceding year but reflected a steadily rising cost curve which began in the fall of 1949 and reached a peak in the fall of 1950 after which a slight levelling off was seen. According to the Boeckh index, based on costs in 20 representative cities, residential construction in August reached a record of 228·3 (1939=100). The prices of materials had moved up steadily throughout the year with the big jump coming after the start of the Korean war.

August set a record of 2,588,900 workers employed by construction contractors. Wage rates, which during the preceding year had approached a stabilized level, resumed their upward march during 1950. As at Oct. 2, 1950, it was estimated that the average hourly wage for all union workers in the construction industry was $2·32 an hour.

Construction of government-subsidized public housing under the Housing act of 1949, which had been expected to contribute between 60,000 and 80,000 units to the year's volume of building, missed that mark by a very wide margin. As at Nov. 30, the Public Housing administration, the unit within the Housing and Home Finance agency having responsibility for the administration of the programme, reported a total of somewhat more than 10,200 units being built under the 1949 act and 5,400 additional units under a previously authorized programme.

A drop of 14% in total building volume to approximately $23,000 million was predicted for 1951 by the *Magazine of Building*, with residential construction showing the biggest drop. Even so the building of new homes was expected to dip not much lower in dollar volume than the record-breaking 1949 total of just under $7,500 million. In terms of the number of dwelling units started, this was expected to mean a total of between 800,000 and 850,000, the federal government's officially announced goal when the second set of restrictive regulations was issued in October. (*See* also ARCHITECTURE; HOUSING.) (H. M. P.)

BULGARIA. People's republic in the eastern part of the Balkan peninsula, bounded N. by Rumania, W. by Yugoslavia, S. by Greece and E. by Turkey and the Black sea. Area (incl. southern Dobruja): 42,796 sq.mi. Pop.: (1946 census) 7,022,206, (mid-1950 est.) 7,300,000. Language (1947 est.): Bulgarian 88%, Turkish 9·8%. Religion (1947 est.): Greek Orthodox 84%, Moslem 11·5% (of whom one-sixth Pomaks, or Moslem Bulgars, remainder Turks), Roman Catholic 0·9%, Gregorian Armenian 0·4%, Jewish 0·3%, Protestant 0·2%. Chief towns (pop., 1947 est.): Sofia (cap., 434,888); Plovdiv (125,440); Varna (77,792); Russe (53,420). Chairmen of the presidium of the National Assembly in 1950, Mincho Neychev and (from May 27) General Gheorghi Damianov; prime ministers in 1950, Vasil Kolarov (*see* OBITUARIES) and (from Feb. 1) Vlko Chervenkov (*q.v.*).

History. Prime Minister Vasil Kolarov died on Jan. 23, 1950. He was succeeded by Vlko Chervenkov who had spent most of the period between the world wars in exile in Moscow. Chervenkov thus combined in his person the offices of prime minister and general secretary of the Communist party, a situation otherwise enjoyed only by Stalin and Tito.

The new premier began his rule by a purge in the Communist party. Dobri Tarpeshev, who had spent 14 years in prison in Bulgaria under the prewar regime and had taken part in the resistance movement during the war, was removed from the party's central committee and from the secretaryship of the Communist-led "mass people's organization," the Fatherland front. In a speech on Jan. 16, Chervenkov blamed Tarpeshev for tolerating the sabotage of the Kostovites in the economic field when he held the office of chairman of the Planning commission and for failing to inform the party's central committee of the "anti-Soviet attitude" of Kostov. Chervenkov also blamed Anton Yugov, minister of the interior and a leader of wartime resistance, for not preventing foreign spies from infiltrating into the security police. In the government reshuffle, Tarpeshev was relegated to the Ministry of Social Welfare, Yugov to that of Industry. Their disgrace marked another stage in the victory of the Muscovite exiles over the home-front resisters in the party leadership.

At a conference of the Communist party held in May, it was announced that the party had 430,000 members. Its social composition was regarded as unsatisfactory. Peasants formed 44% of the membership, and one-quarter of these were members of collective farms; workers formed only 25·8%, whereas two years previously they had formed 26·5%, while civil servants had increased their proportion during the same period from 16·3% to 17·8%. Nearly 30% of all civil servants in the country were party members, whereas only 19% of all workers had joined the party. Among the sins of the party "unmasked" at the conference were insufficient vigilance towards Kostovites, too frequent expulsions of party members for frivolous reasons, and the tendency too easily to accept false accusations against members. The conference further criticized Tarpeshev, in his new capacity of minister of social welfare. Others attacked were the minister of education, K. Dramaliev, and the director of the party's newspaper, Petr Gheorghiev. The latter's accuser was the head of the party's "Agitprop" department, Ruben Levy. Soon after the conference a further cabinet reshuffle took place. The minister of defence, Gheorghi Damianov, was transferred to the decorative post of president of the presidium of the National Assembly and was succeeded by his deputy, Lieut. General Petr P. Panchevsky.

The collectivization of agriculture made considerable progress during the year. On Jan 1, there were 1,605 collective farms, with 161,000 members and controlling an area of 560,000 ha. On Sept. 9, 1950, according to a speech by vice premier Vladimir Poptomov, there were 2,375 with an area of 1,847,113 ha. Collective farms now possessed 11% of the

arable land in Bulgaria and produced 20% of the country's agricultural output. This result exceeded the target given in a government statement of Jan 29, which had aimed at 800,000 ha. for collective farms by the end of 1950. How it was achieved was somewhat of a mystery. In March the assistant minister of agriculture and the head of the collective farms department of the ministry had been dismissed, and the minister himself reprimanded, for giving instructions for the creation of collective farms. The instructions themselves had been revoked. Chervenkov himself had declared in a speech of April 5 that the process must be entirely voluntary, that results must be obtained not by compulsion but by example and persuasion. Despite this apparent relaxation of pressure the pace was double that originally intended.

In the cultural field, book production followed the lines desired by the party leaders, Since 1945, it was announced, 13·7 million copies of books had been produced in Bulgaria, of which the works of Gheorghi Dimitrov, Stalin and Lenin accounted for more than 2·5 million. In the artistic field, however, progress was less satisfactory. In April the Academy of Art was reorganized with the avowed aim of eliminating bourgeois teaching and to make clear that "not only ideological education but also creative development of young artists depends on the quality of teaching of Marxism-Leninism." The reorganization did not at once achieve its aim. A prominent Bulgarian painter, Alexander Ghendov, presumed to write a letter to Chervenkov, complaining of the way that official artistic policy was being executed, and indeed of the policy itself. Chervenkov replied by a speech to the Painter's union on May 26. Ghendov was denounced as the spokesman of the "bourgeois individualistic revolt against the spirit and the leading role of the party in figurative art, and against the party's struggle to overcome the rotten and demoralized culture of western Europe." A campaign against the new sin of Ghendovism then followed in the Bulgarian press. It pointed out that the best painters today followed Soviet fine arts, seeking inspiration from "the masterpieces of Surikov and Repin, masters of classical Russian painting, and from the best examples of pictorial art in the world." Ghendov's crime was explained when it was learned that he had studied in Berlin and Moscow under artists who had subsequently been unmasked as enemies of the Soviet Union.

The United States broke off diplomatic relations with Bulgaria on Feb. 20, after the Bulgarian government had demanded the recall of the U.S. minister on the ground that he had been implicated in the Kostov trial. Bulgarian relations with Yugoslavia continued to be as bad as possible. A dispute with Turkey became serious in the summer when the Bulgarian government decided to expel to Turkey 250,000 members of the Turkish minority in Bulgaria. The Turkish government stated that it could not possibly find room for such large numbers at sudden notice. It also suspected that among the expelled there would be Communist agents and spies. The Bulgarian government dumped numbers of unfortunate people on the Thracian border. (H. S.-W.)

Education. Schools (1949-50): kindergarten, including part-time schools 1,403, pupils 57,487, teachers 2,124; primary 6,112, pupils 7,556,280, teachers 18,801; elementary 2,960, pupils 308,160, teachers 12,636; secondary 218, pupils 112,633, teachers 4,624; technical 101, pupils 26,800, teachers 943; universities and institutions of higher education (1947-48) 9, students 49,800, professors and lecturers 1,283. Illiteracy (1946) 23%.

Agriculture. Main crops ('000 metric tons, 1947; 1948 in brackets): wheat 902 (1,503); rye 196; barley 131 (249); oats 77 (105); maize 783 (890); sugar, raw value (1948; 1949 in brackets) 75 (54). Livestock ('000 head): cattle (1948) 1,918; horses and mules (1948) 449; sheep and goats (1948) 8,995; pigs (1948) 957; poultry (1947) 10,329.

Industry. Fuel and power (1947; 1948 est. in brackets): coal ('000 metric tons) 4,111 (3,933); electricity (million kwh.) 480 (553).

Foreign Trade. (Million leva, 1948) import 35,119; export 34,114. Main sources of imports: U.S.S.R. 58%; Czechoslovakia 12%. Main destinations of exports: U.S.S.R. 52%; Czechoslovakia 11%. Main imports: metals, machinery and textiles. Main exports: tobacco and products.

Transport and Communications. Roads (1945): 13,870 mi. Licensed motor vehicles (Dec. 1949): cars 6,000; commercial 5,000. Railways (1949): 1,996 mi. Telephones (1948): 54,347. Radio receiving sets (1949): 205,000.

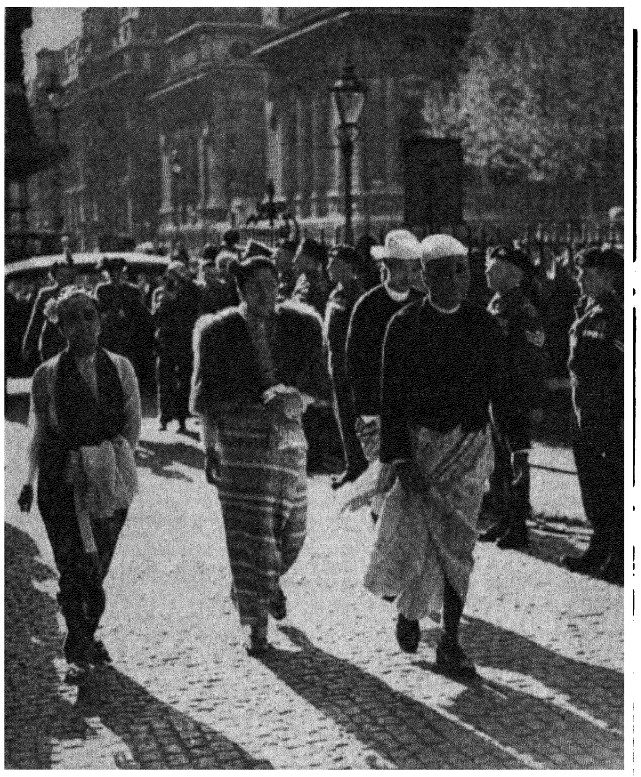
Finance and Banking. (Million leva) budget: (1949 est.) balanced at 152,614; (1950 est.) revenue 207,252, expenditure 198,018. National debt (March 31, 1947) 68,896. Currency circulation (Mar. 1947) 35,000. Saving deposits (Dec. 1947) 17,996. Monetary unit: *lev* (pl. *leva*) with an official exchange rate of 810 leva to the pound and 290 leva to the U.S. dollar.

BUNCHE, RALPH JOHNSON. U.S. political scientist (b. Detroit, Michigan, Aug. 7, 1904). For his career see *Britannica Book of the Year 1950.*

Bunche joined the United Nations secretariat as director of the division of trusteeship in June 1946 and was assisting Count Folke Bernadotte of Sweden as mediator in Palestine when Bernadotte was assassinated in Sept 1948. Afterwards Bunche supervised the truce and armistice agreements there. For this and for his other work on behalf of the United Nations he was awarded the Nobel peace prize for 1950. He was the first Negro to receive it. In October he was appointed professor of government at Harvard university. He was presented with the award in Oslo on Dec. 10—the anniversary of the death of A. B. Nobel.

BURMA. Independent federal republic lying on the eastern side of the Bay of Bengal, between Pakistan and India on the northwest, Tibet on the north and China, Indo-China and Thailand (Siam) on the east. The republic comprises Burma proper, the Shan state, the Kachin state, the Chin special division and, when it is constituted, the Karen state. Area: 261,749 sq.mi. Pop.: (1941 census) 16,823,798, (1947 est.) 17,000,000. Racially, the peoples of Burma are Mongoloid. About 90% are Buddhist by religion, and about 70% use the Burmese language. Largest indigenous minorities (1931): Karens 1,367,673, of whom 218,790 were Christians; Shans 1,057,406; Chin-Kachin group *c.* 750,000. Largest immigrant minorities: Indians 1,017,825 in 1931, divided equally between Moslems and Hindus; and Chinese *c.* 380,000 in 1941. Chief towns: Rangoon, capital and main port (pop. 1941, 501,291); Mandalay (pop. 1941, 163,537); Moulmein (pop. 1931, 65,506); Bassein (pop. 1941, *c.* 50,000) and Akyab (pop. 1931, 38,094). President of the republic, Sao Shwe Thaik; prime minister, Thakin Nu.

History. During the year steady progress was made by the government's forces in reducing the several types of rebels who were in the field. The opening months of the year saw the recovery of much of the territory held for the previous 12 months by the Karens, and subsequently the left-wing rebels also suffered severe set-backs. Advancing northwards along the Sittang valley, the government troops took Pyuntaza on Feb. 25 and Kyauktaga the following day, and on March 19 Toungoo, capital of the Karen "government," also fell. The loss of Toungoo was a severe blow to the Karen cause, and though resistance continued, by the end of the year it was confined to little more than two detached areas, the hilly district of Papun by the Salween river and the more inaccessible parts of the Irrawaddy delta. The Karens suffered also the loss of their leader, Saw Ba U Gyi, who was killed on Aug. 12. The principal reason for these serious defeats appeared to have been the Karens' shortage of military supplies; despite this, there were still at the end of the year several thousand Karens in the field, armed, trained and disciplined and apparently determined to carry on their resistance until their demand for an autonomous Karen state should be conceded. By the end of the year there were no signs of any progress towards a political settlement, except that the Regional Autonomy commission had been revived.



Thakin Nu, prime minister of Burma, arriving at Westminster Abbey, May 11, 1950, for a service of commemoration to those who fell in Burma in World War II.

After the capture of Toungoo, the government forces turned much of their attention to the left-wing rebels. A drive northwards up the Irrawaddy valley led to the capture on May 19 of Prome, the headquarters of the so-called Democratic front. This organization was already seriously weakened by differences of opinion and personal rivalries between the Communists and the People's Volunteer organization who were its principal components, and it was rumoured that the two factions had come to actual warfare with one another in March. After the fall of Prome, many of the disheartened P.V.O. laid down their arms and surrendered. Later, at the end of the rainy season, the government forces resumed their operations and on Oct. 13 took the important riverine town of Thayetmyo.

The result of these various operations was that the principal routes between Rangoon and Upper Burma were reopened to use after more than a year's interruption. The main railway and the trunk road from Rangoon to Mandalay through Toungoo and the Irrawaddy river from Rangoon to Mandalay, by way of Prome and Thayetmyo, were once more accessible to lawful traffic, though they were still at the end of the year liable to sporadic attack. On the other hand, though the government held nearly every important town and the principal routes, the administration had little control a short distance away from the towns and routes, and in many districts law and order still hardly existed.

In the political sphere, the principal event was the expulsion from the government party—the Anti-Fascist People's Freedom league—of the two leaders of the Trade Union congress (Burma) and the suspension, for a month, of the congress's affiliation to the league. The leaders of the T.U.C.(B.) had long displayed strongly leftist sympathies and had earlier in the year sought affiliation to the Communist-controlled World Federation of Trade Unions; on Sept. 5 Thakin Hla Kyway, in a speech in the legislature professing to support the government's approval of United Nations action in Korea, in fact opposed it. On Sept. 21, therefore, he and Thakin Lwin were expelled from the league.

In external politics, Burma's relations with the United Kingdom remained cordial. On March 7 the offer was made, and shortly afterwards accepted, of a loan of £6 million to Burma from Commonwealth sources; of this the United Kingdom provided £3,750,000, India £1 million, Pakistan and Australia £500,000 each and Ceylon £250,000. A British parliamentary delegation visited Burma in January, and in May the Burmese prime minister, Thakin Nu, visited the United Kingdom where on May 11 he attended a service of remembrance for those who fell in the Burma campaigns. The position of British commercial interests was, however, not happy. In the more disturbed districts, notably Tavoy, Communist activities brought British-owned enterprises, such as tin mines, to a standstill. The oil companies also met difficulties. Early in 1949 the British government, anxious to facilitate Burma's economic recovery, had guaranteed the companies against losses incurred in restoring the installations destroyed in 1942. On Jan. 8, 1950, the guarantee was ended since there appeared to be no prospect of a speedy return to peaceful conditions in which the concerns could operate profitably. The companies therefore dismissed some 2,500 workers. These appealed to the Industrial Court of Arbitration which declared the dismissals illegal and in general attempted to prescribe the policy which the companies must follow. The matter was taken to the Supreme Court which in October gave a partial reversal of the Industrial Court's decision, especially in regard to the attempt to dictate policy.

In October an economic co-operation agreement was entered into between Burma and the United States, under which Burma was to receive aid to the extent of $8-10 million in the year ending June 30, 1951; a special technical and economic mission was to be established in Rangoon to advise the Burmese government. The U.S. government also made a gift of ten landing craft to the government for the use of the Burmese navy. An unfortunate incident detrimental to good U.S.-Burmese relations occurred, however, in the arrest of a well-known American missionary surgeon, Dr. Gordon Seagrave, on a charge of giving aid to the Karen rebels.

Relations with China presented some slight problems also. Early in the year remnants of Kuomintang forces, fleeing before the victorious Chinese Communists, crossed the border from Yunnan and took refuge in the Burmese Shan state of Kengtung. They maintained themselves there as organized units, still possessing their arms, and it was suspected, improbable though it might seem, that they were planning an attack on Yunnan. The situation was liable to cause strained relations with China, and in July the Burmese government took strong measures to deal with the problem: Burmese forces attacked the Chinese positions, and some hundreds of men who were captured were sent to internment camps in Meiktila and Mandalay. But though the remainder were dispersed from their main concentrations near the Burmese-Thai border, they remained in the field, preying on the countryside. (B. R. P.)

Education. State and private primary schools (March 1948) 4,795, pupils 431,684, teachers 11,315; secondary schools (1947-48) 142, pupils 11,648, teachers 722. Rangoon university (1949): students 2,960 (incl. 640 women).

Agriculture and Fisheries. Main crops ('000 metric tons, 1948; 1949 in brackets): rice 5,287 (4,076); ground nuts 146 (130); cottonseed 14 (14); cotton, ginned, 8 (8); sesame seed 41·5 (32·9); dry beans 45 (45); tobacco (1949-50) 29. Livestock ('000 head, 1948): cattle 5,207; sheep 21; goats 172; pigs 394; horses 12; buffaloes 721. Fisheries: total catch estimated at 500,000 tons annually.

Industry. Factories (1947) 473; persons employed 46,480. Raw materials: silver (fine ounces, 1948) 450,000; tin concentrates (metric tons, 1948; 1950, six months, in brackets) 1,773 (609); natural rubber (net exports, 1948; 1949, three months, in brackets) 9,240 (1,890); timber, teak (1948-49 rafting season) 68,938 logs; zinc and lead output insignificant in 1949.

Foreign Trade. (Million rupees, 1949; 1950, six months, in brackets): imports 373 (196); exports 733 (362). Main sources of imports (1948-49): India 31·6%, United Kingdom 28·2%, China 8·61%. Main destinations of exports (1948-49): India 37·8%, Ceylon 19·0%, British possessions and Malaya 13·3%. Main imports (1948-49); textiles 36%, food products 13%, machinery appliances and vehicles 11%. Main exports: rice 82%, metals and ores 3%.

Transport and Communications. Roads (1949) 12,472 mi. Licensed motor vehicles (Dec. 1949): cars 5,000; commercial 24,000. Railways: (1948) 1,786 mi.; passenger-mi. (1949) 74 million; net freight ton-mi. (1949) 113 million.

Finance and Banking. Budget ('000 rupees): (1949) revenue 430·3, expenditure 528·0; (1950 est.) revenue 483·6, expenditure 532·2. Monetary unit: *rupee* with an exchange rate of Rs. 13·33 to the pound and Rs. 4·775 to the U.S. dollar.

BUSINESS REVIEW. Apart from the long-term trend towards the higher use of power and more rapid communications (illustrated by striking increases in the production of electric power and in civil aviation and by the large tonnage of tankers under construction), business conditions in 1950 were governed by two main factors: the successful working-out of the devaluation policy adopted under the lead of the United Kingdom by a number of important countries in the autumn of 1949; and the boom on the U.S. home market.

In consequence of devaluation the world bought less from the United States, with the result that during the first half of 1950 American exports fell to $4,899 million (*cf.* $6,694 million in the first half of 1949); and this fall in exports was a bigger factor than the increase in American imports (which nevertheless was substantial) in reducing the U.S. export surplus from $3,267 million in the first half of 1949 to $1,047 million in the first half of 1950. The world's dependence on goods obtained from the United States without immediate payment thus became less than one-third of what it had been. Since Marshall aid was tapering off, the effect of devaluation was to place world business on a more lasting foundation and to supplement Marshall aid in spreading the demand for raw materials, which in any case was being fostered by the American stock-piling programme. Devaluation could not have been so successful without the rising level of business activity in the world outside the United States. Still more important was the American boom, which easily allowed American producers to sell at home the goods that they were no longer able to sell abroad.

The successful employment of devaluation illustrated the growing skill acquired by governments in dealing with economic difficulties, the recovery from the minor depression of 1949 being helped by the fact that many governments had learnt in a hard school how to combat such a depression. When private initiative failed the state maintained investment through the expansion of credits or of currency.

At the beginning of the year industrialists had not yet decided that it was worth while to spend money on increasing the existing apparatus of production all round; and hesitations of this kind were partly reflected in the Schuman plan, or European coal and steel pool (*q.v.*), which, though essentially a political instrument, also had the makings of a cartel—the classical defence mechanism in a period of over-production (it was in this capacity that it appealed to industrialists in France and in the German federal republic). But on the whole the amount of money waiting for employment was increasing. If optimism had been universal, a due proportion of this money would have been used in bidding for (and consequently in raising the price of) industrial shares; but there was in fact a striking divergence between the downward trend of industrial share prices and the upward trend of money available in a number of places. This development was manifest some months before the Korean crisis.

But these were warning signs rather than tangible indications of a decline: in most directions the statistical symptoms were good. At the turn of the year the price of raw materials had not diverged widely from the level ruling a year earlier; and soon after prices began to rise, so that by the end of June—long before the Korean war had made itself fully felt— substantial gains in the prices of maize, cocoa, rubber, hides, wool, copper, zinc and steel scrap were recorded in American quotations (not affected by devaluation). A general expectation that the turnover of world trade was likely to improve was reflected in the increased tonnage of mercantile shipping under construction.

These improvements would have been impossible without the striking recovery in the United States. By the beginning of the year it was fairly clear that business had overcome the incipient depression of 1949. In fact a huge volume of purchasing power was lying ready, and the Christmas trade showed that people were ready to use it. Private enterprise indeed showed some reluctance to spend its money on capital projects, and in normal conditions this might have led to a decline in the economic cycle; but in 1950 government spending provided a substitute and a preventative. The president's recommendations for the fiscal year ending June 30, 1951, assumed a deficit of $5,100 million (£1,800 million).

During the early months of the year U.S. business was hampered by the Chrysler strike and the coal strike, the latter of which at one stage began to clog transportation. But these obstacles had no lasting effect. During the first and second quarters the earnings of leading business undertakings were a shade higher than during the corresponding quarter of 1949. The fact that orders for machine tools in March were the highest since June 1946 showed that many industrialists had by now made up their minds that they need not fear a depression.

Sentiment became more optimistic as the year went on. The Department of Commerce had assumed that capital expenditure would be running at a lower level than in 1949 and that the difference would increase during the year. But late in spring it became clear that the margin would be substantially smaller; and by the middle of the year capital expenditure was increasing. The output of steel rose until by mid-1950 it was running at 101·5% of rated capacity, the highest output ever recorded; and despite this pressure on capacity the arrears of orders were extremely large. In step with the demand for steel went a demand for such metals as copper and zinc. During the second quarter aluminium, nickel and tin had also risen in price, as had various chemicals and rubber.

Meanwhile a number of factors were at work to stimulate business nearer the consuming end. Government policy put more money into the hands of veterans and farmers. In addition there were more consumers: the number of new households formed exceeded all earlier estimates. This fact strengthened the boom in housing and helped makers of household adjuncts in the widest sense—makers, for example, of cars and of television sets. By the middle of 1950 the output of motor vehicles was running at the rate of 10 million units a year. The soft goods trade also improved as the year went on. Easter sales were rather disappointing, but the department stores did well in the early summer. Buying of wool, rayon and cotton textiles showed that manufacturers were looking forward to a continuation of business at a high level.

The flourishing business conditions were those associated with a largely (but not entirely) free economy. Incomes were high and very widely spread: refrigerators and television sets were no rarity in the houses of medium-paid workers. Competition for customers was keen; and the existence of a substantial reserve of unemployed checked, though it did not eliminate, the demands of labour.

Outside the United States the world's most important group of trading countries was that constituted by the former belligerents in western Europe and by Japan. The most striking aspect of business conditions in these countries lay in their recovery from the abnormalities of World War II: production in most instances was actually higher than before; and governments were able largely to finance their needs without recourse to the printing press—a proof that these needs were such as could be met by orthodox means.

Within this group a special position belonged to the defeated powers, Germany, Italy and Japan. All had suffered particularly heavily during the war, and in all recovery had been delayed. But in 1950 their recovery had got into its stride and was more rapid in Western Germany and in Japan than in the victorious states, which by 1950 had already completed a respectable advance. The defeated countries had in common a comparatively liberalistic lay-out, which in practice meant a wide spread between maximum and minimum incomes, fairly low consumption by the great mass of people and a downward trend in retail prices (this trend showed signs of ending under the influence of the Korean affair). Germany and Italy suffered from unemployment due to the rapid increase of the population. The fact that these increases could not be fully absorbed into the productive process and therefore provided a merely negligible market differentiated business conditions in these poorer countries from those in the United States, where the growth of the population provided a keen market. Business conditions conformed to this structure: semi-luxury articles sold well in Germany and Italy, but the poorer majority looked at their money twice before they spent it on standard consumption goods; in Germany a quite small increase in the price of bread had severe political repercussions, and the very large turnover recorded at the summer sales showed how anxiously the public had been waiting for lower prices. In these circumstances it was natural that the traditional German skill in catering for the lower middle class should re-assert itself. Exports rose steeply. In Japan the output of cotton textiles and wool yarn grew rapidly, and complaints of competition could be heard in Yorkshire and in South Africa.

In the defeated countries *laissez-faire* meant pressure on the working population to increase output; and elsewhere in western Europe the same policy implied a similar pressure. But the arrears to be made up were smaller: there was a shortage of work to be done, and with it signs of slacker business. In Belgium and France, for instance, industrial production was barely maintained, while prices were steady where they did not tend downwards; and, in striking contrast to what was happening in the rest of Europe, the production of electric power did not increase. Switzerland showed the characteristic danger signs—rising unemployment and a fall in wholesale prices and in the cost of living.

The remaining former belligerents of western Europe comprised the United Kingdom, the Netherlands, Denmark and Norway; and Sweden can conveniently be considered with them. These countries shared a general business recovery: conditions continued to be practically normal. In Norway and Denmark, for example, the output both of consumers' and of capital goods increased, but Norway's output increased more rapidly than Denmark's. Unemployment either diminished or else was so small that its fluctuations were negligible. Prices were steady or tended to rise. The picture thus was one of an economy in which the oscillations of the trade cycle were damped down and where the upward trend was more prolonged if less violent than under *laissez-faire*. These favourable conditions were purchased at the price of continued if diminishing government control, one of the instruments of which was heavy taxation.

In 1950 the world's demand for raw materials accentuated the trend of earlier years: essential foodstuffs continued to matter less; base metals and semi-luxuries like coffee mattered more. The effect was noticeable for example in Argentina, where it proved difficult to find a remedy for the disadvantages resulting from this shift. On the other hand Brazil gained from the striking rise in the price of coffee which began in the last quarter of 1949 and continued in 1950. Later in the year the higher prices and larger sales of wool, hides and cocoa made themselves felt in Latin America generally. The growing demand from the United States was particularly important; and in this respect the experience of the so-called "banana republics" of Central America was characteristic. These countries also benefited by an improvement in the terms of trade, for example, in the matter of imports of machinery, steel and chemicals from Western Germany.

In the great rubber- and tin-producing area of south-eastern Asia business was helped because strongly rising prices accompanied a vigorous rise in production reflecting the return to more normal conditions. During the first six months of the year Malayan exports of tin and rubber sufficed, despite devaluation, to earn substantially more dollars than during the corresponding period of 1949. In Indonesia the output of rubber went ahead rapidly, and the boom in exports was accompanied by a boom in imports. This development began before the Korean affair.

Conditions were different in the great raw-material producers, Canada and Australia, where the course of business was also determined by industrial factors. The Canadian economy, being closely linked to that of the United States, suffered from the recession there and had not fully recovered by the beginning of the year: as in the United States, expenditure during the earlier months centred on consumption goods rather than on capital goods; and production of base metals remained sluggish. As the year went on, however, Canada began to share the business activity of the United States; and by the middle of the year industrial output and international trade reached and maintained new high levels. In Australia on the other hand devaluation gave an early stimulus to exports: business sentiment was cheerful; prices, including those of ordinary shares, rose; and people were prepared to invest in capital schemes. Towards the end of the year there were signs of a boom.

In the U.S.S.R. and, largely, in the countries within its orbit the individual element essential to business elsewhere has been more or less eliminated. In the U.S.S.R. the output of meat and of other foodstuffs fell fairly severely short of the production plan. The production of spinning machinery increased but was not reflected in a higher production of textiles. As in other countries the output of electric power and of the engineering industry was high. There was a bad muddle in the timber industry, which hampered the production of cellulose and paper. A large increase in the manufacture of private cars had an odd parallel in the similar increase (relatively to that recorded for commercial vehicles) in Western Germany and France—both of them countries where the middle and upper middle classes were growing in strength. The reduction in the price of a large range of consumption goods decreed in connection with the revaluation of the rouble in March might have been expected to increase turnover; and when business failed to respond the blame was put on the retailing agencies.

Developments in the second part of the year were powerfully modified by the impact of rearmament in many important countries and of the new intensification of the U.S. stock-piling programme. The U.S. economy reached new heights of activity: rearmament orders now absorbed the last unemployed worker in Detroit. As a concomitant of this feverish activity governmental controls were expected and, in some instances, anticipated by industry. In August

industrial production reached a new record. Very high levels were attained both at the beginning of the productive process, where the output of steel remained close to the theoretical maximum, and at the end, where output was beyond record levels over a selection of goods ranging from motor vehicles to television sets. This intense activity was accompanied by some inflation: during the first three months of the Korean fighting commercial bank loans were estimated to have expanded to $2,500 million (£890 million). By this time Canadian recovery was fully in step with that of the United States.

As a result of the general rearmament an abrupt sharpening occurred in the world demand for a wide range of goods. This made itself felt in a striking manner on the great producers of raw materials, who were in any case favoured not only by the turn of the trade cycle but also by the long-term development of world business. World production of wool, for example, was still well below the artificially high level reached during the war and slightly below the prewar level, whereas consumption was already high, with the result that stocks were nearly exhausted; and at the wool sales in the autumn, though the Korean war and the resultant rearmament contributed much to it, the rise in prices was equally due to world-wide pressure for higher standards of living.

The position was similar on the rubber market: the production of natural rubber rather exceeded consumption, but the output of synthetic fell short. The great rise in the level of consumption was due to the great development of civilian motor transport no less than to military demands. The Korean war merely struck the market at a critical state and touched off a violent rise in prices. Similarly with copper (which is a good index of the state of business in the electrical industries) the level of consumption was not only higher than in 1949 but also, more strikingly, higher than before World War II; world stocks dwindled; and in the spring the natural result occurred in the shape of a strong rise in prices, which the Korean war helped merely to accentuate. Analogous factors were at work in the markets for cotton, iron and steel.

The way in which this sudden demand served to stimulate business activity is well illustrated by the case of Australia, which derived a very large additional income from its wool and also in a smaller measure from its wheat: business activity reached a high level and an intense demand arose for capital goods, which benefited countries supplying Australia; and at the same time the increase in the country's earnings of dollars gave greater freedom of action to the sterling group as a whole (devaluation had already allowed the sterling area to build up its reserves of gold and dollars quite apart from what it gained in the way of Marshall aid; and this process was now speeded up). In Western Germany, too, the rather dull business conditions gave way to a sudden activity which was set in motion by export orders connected with the widespread rearmament drive.

Towards the end of the year the dominant part still lay with the United States, where it seemed that the industrial apparatus was vast enough to meet the demands of peace and of rearmament with something to spare. It was hence possible to argue that the boom must presently give way to a recession. There were in fact some signs of slackening towards the end of the year: on the other hand a rearmament drive of unprecedented dimensions was looming ahead. For the rest of the world these uncertainties were tempered by the knowledge that the world's economic dependence on the United States was lessening. (*See* also BANKING; EMPLOYMENT; INTERNATIONAL TRADE; NATIONALIZATION; PRICES; STOCKS AND SHARES; TAXATION.)

(W. H. JN.)

BYELORUSSIA. A republic formed on Jan. 1, 1918, and incorporated in the Union of Soviet Socialist Republics on Dec. 30, 1922. It is bounded N. by Latvia, E. by Russia, S. by the Ukraine and W. by Poland and Lithuania. The Byelorussians, or White Russians, are a Slav people akin to the Russians and the Ukrainians. Area: (before Sept. 17, 1939) 49,022 sq.mi.; (annexed from Poland) 32,267 sq.mi.; total 81,289 sq.mi. Religion (Nov. 1939 est.): Greek Orthodox 71%, Roman Catholic 20%, Jewish 8%, other 1%. The population was distributed as follows:

	In pre-1939 Soviet Byelorussia	In area annexed from Poland	Total (Nov. 1939 est.)
Byelorussians	4,454,400 (80%)	1,458,100 (45%)	5,912,500 (67·2%)
Poles	111,360 (2%)	1,296,800 (40%)	1,408,160 (16·0%)
Jews	445,440 (8%)	291,800 (9%)	737,240 (8·4%)
Russians	389,800 (7%)	64,800 (2%)	454,600 (5·1%)
Others	167,000 (3%)	130,500 (4%)	297,500 (3·3%)
Total	5,568,000	3,242,000	8,810,000

Poles were either deported to the Soviet Union in 1939-40 or transferred to Poland in 1945-46 and Jews were exterminated by the Germans during their occupation of Byelorussia. Further reductions were occasioned by war losses which, for the armed forces alone, were estimated at 350,000. In March 1950, however, the official Soviet estimate of the population was 9·3 million. Chief towns (1939 est.): Minsk (cap., 239,000); Vitebsk (167,000); Gomel (144,000). Chairman of the presidium of the Supreme Soviet of the Byelorussian S.S.R., Vasily Ivanovich Kozlov; chairman of the council of ministers, Aleksey Efimovich Kleshchev.

History. Great Britain and the United States having accepted at Yalta the Soviet demand that Byelorussia and the Ukraine (*q.v.*) should be founder members of the United Nations, Kuzma Benediktovich Kiselev was appointed minister of foreign affairs of Byelorussia and in 1945, at San Francisco, was among the signatories of the U.N. charter. He headed the Byelorussian delegation at the successive general assemblies of the U.N. and was at Lake Success also from Sept. to Dec. 1950. But there was no Byelorussian representation abroad, and at Minsk no foreign country—not even a people's republic—maintained a diplomatic mission.

Byelorussia had suffered from the ravages of World War II, four-fifths of the houses at Minsk and Gomel and nine-tenths at Vitebsk being destroyed. In the countryside 416,000 buildings belonging to the collective farms and 1,215,000 buildings in the villages, including 420,000 cottages, were burned or destroyed and 3 million people were left homeless. Cattle in 1945 numbered only 30% of the prewar figures and pigs only 10%. A great work of relief and rehabilitation included a shipment by U.N.R.R.A. of 133,244 long tons of supplies valued at $60,440,000. The five-year plan adopted on March 18, 1946, stipulated that by Dec. 1950 a total of 2·7 million sq.m. of housing accommodation should be made available and that rehabilitation should begin by restoration of housing facilities and municipal services at Minsk. By the end of 1950 no claim was made that complete reconstruction had been achieved. It was announced in Jan. 1949 that more than 360,000 homes had been built for collective farmers and more than 2 million people had moved to them from dugouts.

By 1939 the collectivization of agriculture had been completed in Byelorussia in its prewar frontiers, but in the area annexed from Poland regimentation of the countryside began only in 1947. Resistance to the movement was met by deportation, and party purges penalized alleged weakness and inefficiency. Nikifor Yakovlevich Natalevich, who in 1938 succeeded N. N. Cherviakov (reported to have committed

suicide) as chairman of the presidium of the Supreme Soviet, was dismissed in 1948 and was succeeded by Kozlov, a wartime guerrilla leader. At the same time Panteleymon Kondratyevich Ponomarenko, chairman of the council of ministers, was moved to Moscow to become a secretary of the central committee of the All-Union Communist party. He recommended as his successor at Minsk Kleshchev, also a former guerrilla leader, who continued to press forward the policy of collectivization in the former Polish territory. On Oct. 29, 1949, Kleshchev announced that 4,000 *kolkhozy* with 200,000 peasant holdings had been formed there. On Oct. 27, 1950, he reported to Stalin that the " principal mass " of the peasants of that territory had joined the *kolkhoz* system.

In Dec. 1950 it was announced that industry was successfully completing the postwar five-year plan. New car, tractor, glass, match and other factories were built and old ones restored, and the capacity of electric power stations exceeded that obtaining in 1940 by 70%. The country's main resource, however, was in its agriculture, and on poor soil it produced potatoes, flax and animal feedingstuffs. Pig and cattle breeding were also important. According to the five-year plan, the total livestock by the end of 1950 was to be as follows: cattle 2,860,000; pigs 2,600,000; horses 770,000; sheep and goats 2,900,000. For the forested areas the target for felled timber in 1950 was 11·1 million cu.m. No claim was published that the results aimed at were attained.

On March 12 Byelorussia elected 31 deputies to the Soviet of the Union and 25 deputies to the Soviet of Nationalities (*see* ELECTIONS). Out of a possible poll of 4,727,950 votes the total cast was 4,727,554 (99·99%) and 4,722,835 (99·90%) votes were said to have been recorded for official candidates. Elected members of the government and party leaders were headed by Nikolay Ivanovich Gusarov, first secretary of the Byelorussian Communist party. Marshal Semen Konstantinovich Timoshenko, commander of the Byelorussian military area, was also elected. On Dec. 17, 71,029 deputies were elected to the 12 provincial, 175 district, 69 town and 2,632 village soviets. More than 99% went to the polls and more than 99% voted for the official candidates of whom one-third were members of the party. The communiqué admitted that a candidate for a village soviet had not obtained an absolute majority and a new election was to be held.

By 1947 there were no Roman Catholics in Byelorussia: Poles had been removed from the country and about 350,000 Roman-Catholic Byelorussians, formerly Polish citizens, were forced to renounce their religion. The majority of Byelorussians in Poland before 1939 were members of a Greek Orthodox Autocephalic Church recognizing the spiritual authority of the oecumenical patriarch in Istanbul. With the help of the Soviet government, Aleksey, the patriarch of Moscow and all-Russia, took authority over the Byelorussian clergy and prohibited contact with the oecumenical patriarchate.

Education. Schools (1949): elementary and secondary 11,789; pupils 1·5 million; technical 110; institutions of higher education 28, students 16,000.

Finance. Budget (1950 est.): revenue Rb. 3,777·5 million, expenditure Rb. 3,730·4 million. (K. SM.)

CABINET MEMBERS. The following is a list of cabinet members of Great Britain and the other members of the Commonwealth of Nations on Dec. 31, 1950.

Great Britain

Post	*Name*
Prime Minister and First Lord of the Treasury	*Clement Richard Attlee
Lord President of the Council and Leader of the House of Commons	Herbert Stanley Morrison
Secretary of State for Foreign Affairs	*Ernest Bevin
Chancellor of the Exchequer	*Hugh Todd Naylor Gaitskell
Minister of Town and Country Planning	Edward Hugh John Neale Dalton
Lord Privy Seal and Leader of the House of Lords	Viscount Addison
Chancellor of the Duchy of Lancaster	Viscount Alexander of Hillsborough
Lord Chancellor	Viscount Jowitt
Secretary of State for the Home Department	James Chuter Ede
Minister of Defence	Emanuel Shinwell
Minister of Labour and National Service	George Alfred Isaacs
Minister of Health	Aneurin Bevan
Minister of Agriculture and Fisheries	Thomas Williams
Minister of Education	George Tomlinson
President of the Board of Trade	James Harold Wilson
Secretary of State for the Colonies	James Griffiths
Secretary of State for Scotland	Hector McNeil
Secretary of State for Commonwealth Relations	Patrick Chrestien Gordon-Walker

Australia

Prime Minister	*Robert Gordon Menzies
Treasurer	Arthur William Fadden
Minister for the Interior (also Minister Resident in London)	Eric John Harrison
Minister for Labour and National Service and for Immigration	Harold Edward Holt
Minister for Commerce and Agriculture	John McEwen
Minister for External Affairs and External Territories	*Percy Claude Spender
Minister for National Development, Works and Housing	Richard Gardiner Casey
Minister for Defence	Philip Albert Martin McBride
Minister for Health	Sir Earle Page
Minister for Transport, Fuel and Shipping	George McLeay
Minister for Trade and Customs	Neil O'Sullivan
Minister for Air and Civil Aviation	Thomas Walter White
Postmaster General	Hubert Lawrence Anthony
Minister for the Army and for the Navy	Josiah Francis
Attorney General	John Armstrong Spicer
Vice president of the Executive Council	Dame Enid Lyons
Minister for Repatriation	Walter Jackson Cooper
Minister for Social Services	William Henry Spooner
Minister for Supply	Oliver Howard Beale

Canada

Prime Minister and President of the Privy Council	*Louis Stephen St. Laurent
Minister of Trade and Commerce	Clarence Decatur Howe
Minister of Agriculture	James Garfield Gardiner
Minister of Public Works	Alphonse Fournier
Minister of National Defence	Brooke Claxton
Minister of Transport	Lionel Chevrier
Minister of National Health and Welfare	Paul Joseph James Martin
Minister of Finance	Douglas Charles Abbott
Minister of National Revenue	James Joseph McCann
Minister without Portfolio	Wishart McLea Robertson
Minister of Labour	Milton Fowler Gregg
Minister of Fisheries	Robert Wellington Mayhew
Secretary of State for External Affairs	Lester Bowles Pearson
Minister of Justice, Attorney General and Solicitor General	Stuart Sinclair Garson
Minister of Resources and Development	Robert Henry Winters
Secretary of State of Canada	Frederick Gordon Bradley
Minister of Veterans' Affairs	Hugues Lapointe
Postmaster General	Edouard Rinfret
Minister of Citizenship and Immigration	Walter Edward Harris
Minister of Mines and Technical Survey	George Prudham

Ceylon

Prime Minister and Minister of Defence and External Affairs	*Don Stephan Senanayake
Minister of Health and Local Government	Solomon West Ridgeway Dias Bandaranaike
Minister of Justice	Lalita Abhaya Rajapakse
Minister of Transport and Works	Sir John Kotelawala
Minister of Finance	Junius Richard Jayewardene
Minister of Agriculture and Lands	Dudley Shelton Senanayake

Post	*Name*
Minister of Labour and Social Services	M. D. Banda
Minister of Education	Edward Alexander Nugawela
Minister of Food and Co-operative Undertakings	Abeyratne Ratnayake
Minister of Posts and Telecommunications	Cathiravelu Sittampalam
Minister of State	A. E. Goonesinha
Minister of Home Affairs and Rural Development	Edwin Aloysius Perera Wijeyeratne
Minister of Industries, Industrial Research and Fisheries	Ganapathipillai Gangesar Ponnambalam
Minister of Commerce and Trade	Henry Woodward Amarasuriya
India	
Prime Minister and Minister for External Affairs	*Jawaharlal Nehru
Minister for Home Affairs	Chakravarti Rajagopalachari
Minister for Food and Agriculture	Kanialal Maneklal Munshi
Minister for States, Transport and Railways	Narasimha Gopalaswami Ayyangar
Minister for Labour	Jagjivan Ram
Minister for Works, Production and Supply	Narhar Vishnu Gadgil
Minister for Health	Rajkumari Amrit Kaur
Minister for Education	Maulana Abul Kalam Azad
Minister for Defence	Baldev Singh
Minister for Finance	Chintaman Dwarkanath Deshmukh
Minister for Communications	Rafi Ahmed Kidwai
Minister for Law	Bhimrao Ramji Ambedkar
Minister for Commerce and Industry	Hare Krishna Mahtab
Minister of Natural Resources and Scientific Research	Sri Prakasa
New Zealand	
Prime Minister and Minister of Finance	*Sidney George Holland
Deputy Prime Minister, Minister of Agriculture and Marketing	Keith Jacka Holyoake
Minister of Labour, Employment, Mines and Immigration	William Sullivan
Attorney General, Minister of Justice and Minister of Scientific and Industrial Research	Thomas Clifton Webb
Minister of Education	Ronald Macmillan Algie
Minister of Internal Affairs and Minister of Social Security	William Alexander Bodkin
Minister of Customs and Associate Minister of Finance, and Minister of Supply and Stamp Duties	Charles Moore Bowden
Postmaster General and Minister of Telegraphs	Walter James Broadfoot
Minister of Lands, Forests and Maori Affairs	Ernest Bowyer Corbett
Minister of External Affairs, Island Territories, Broadcasting and Tourist and Publicity Departments	*Frederick Widdowson Doidge
Minister of Works, Housing, Transport and Railways, and Marine	William Stanley Goosman
Minister of Defence, Rehabilitation, War Pensions and Civil Aviation	Thomas Lachlan Macdonald
Minister of Health, Industries and Commerce	Jack Thomas Watts
Minister without Portfolio and Minister for the Welfare of Women and Children	Mrs. Grace Hilda Ross
Minister without Portfolio	John Ross Marshall
Minister without Portfolio	William Henry Fortune
Pakistan	
Prime Minister	*Liaquat Ali Khan
Minister for Foreign Affairs and Commonwealth Relations	Sir Mohammad Zafrullah Khan
Minister for Finance and Economic Affairs	Ghulam Mohammad
Minister for Defence, States and Frontier Regions	Mahmud Husain
Minister for the Interior, Information and Broadcasting	Khwaja Shahabuddin
Minister for Food and Agriculture and acting Minister for Law and Labour	Pirzada Abdus Sattar
Minister for Education and Commerce	Fazlur Rahman
Minister for Refugees and Rehabilitation	Ishtiaq Husain Qureshi
Minister for Kashmir Affairs	Mushtaq Ahmad Gurmani
Minister for Industries	Chaudhry Nazir Ahmad
Minister for Communications	Sardar Bahadur Khan
Minister for Works and Health	A. M. Malik
South Africa	
Prime Minister and Minister of External Affairs	*Daniel François Malan
Minister of Finance	Nicolaas Christiaan Havenga
Minister of Lands and Irrigation	Johannes Gerhardus Strydom
Minister of Justice	Charles R. Swart
Minister of Transport	Paul Oliver Sauer
Minister of Agriculture	S. P. Le Roux
Minister of Economic Affairs	Eric Hendrik Louw
Minister of Health and Social Welfare	Albert Jacobus Stals
Minister of the Interior	Theophilus Ebenhaezer Dönges
Minister of Defence	François Christiaan Erasmus
Minister of Labour, Public Works and Forestry	Barend Jacobus Schoeman
Minister of Native Affairs	H. F. Verwoerd
Minister of Mines, Education, Arts and Science	Johannes Hendrikus Viljoen
Minister of Posts and Telegraphs	Jozua François Tom Naude

* *See* separate article. (*See* also GOVERNMENT DEPARTMENTS.)

CAMBODIA: *see* INDO-CHINA.

CAMBRIDGE UNIVERSITY. The academic year 1949-50 opened with the following numbers, the figures in parentheses showing corresponding totals for 1938: the men's colleges had 5,499 (4,849) undergraduates; 1,304 (483) B.A.s; 437 (159) research students; and 1,606 (1,392) M.A.s. The women's colleges had 548 undergraduates, 93 fourth year and research students and 330 M.A.s.

During the year the new buildings at King's, Christ's and St. Catharine's were completed. An Institute of Education was established under the Ministry of Education to be responsible for the certification of teachers in East Anglia, etc. Madingley hall was acquired as a house of residence for post-graduate students. The Regent house would, in future, be used as a university combination room for graduates.

New chairs were founded in economics, Scandinavian studies, veterinary clinical studies and applied thermodynamics; and readerships were established in public law and administration, surface chemistry, plant cytogenetics and clinical psychology.

The Nuffield foundation gave grants for work in chemistry and human ecology; the Rockefeller foundation for the study of neuro-physiology; and a bequest for Assyriology was received from Mrs. Johns in memory of her husband.

The following retired under the age limit: Professor C. E. Raven (divinity); Professor D. S. Robertson (Greek); Professor J. H. Hutton (anthropology); Professor J. E. Littlewood (mathematics); and Professor H. A. Hollond (law).

During the year Trinity hall celebrated its sexcentenary, and Downing college its 150th anniversary. Both colleges entertained considerable numbers of alumni.

C. E. Raven retired from the mastership of Christ's college and was succeeded by B. W. Downs, the first professor of Scandinavian studies.

Honorary doctorates were conferred on the following: Viscount Samuel; Sir Brian Hubert Robertson, high commissioner for Western Germany; Sir Gerald F. Kelly, president of the Royal Academy; Vannevar Bush, president of the Carnegie institute, Washington, D.C.; and W. S. Middleton, president of the American College of Physicians.

Among the losses by death during the year were Jan Christiaan Smuts (Christ's), chancellor of the university. The vice chancellor in his annual address said, " In this place we commemorate not only his greatness and his supreme versatility of achievement, but also his direct and simple

friendliness, his abiding enthusiasm and his affectionate loyalty to his college and university." Others who died were J. N. Keynes (Pembroke), registrary emeritus; W. H. D. Rouse (Christ's), headmaster of the Perse school and formerly lecturer in Sanskrit, the protagonist of the direct method of teaching classics; Miss K. T. B. Butler, formerly mistress of Girton; R. H. Rastall (Christ's), formerly university lecturer in mineralogy; S. F. Armstrong (Christ's), botanist; C. F. Angus, vice master of Trinity hall; Alex Wood (Emmanuel), formerly university lecturer in physics; W. L. Knox (Pembroke), New Testament scholar; G. S. Graham Smith (Pembroke), formerly reader in preventive medicine.

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CAMEROONS: *see* FRENCH UNION; NIGERIA; TRUST TERRITORIES.

CANADA. Self-governing member of the Commonwealth of Nations covering all North America north of the United States except Alaska. Canada is a federal union under the terms of the British North American act (1867). The original provinces were:

	Area (in sq.mi.)	Population (1941 census)	Population (June 1, 1950 est.)
Nova Scotia	21,068	577,962	658,000
New Brunswick	27,985	457,401	522,000
Quebec	594,860	3,331,882	3,976,000
Ontario	412,582	3,787,655	4,512,000
To these were added:			
Manitoba (1870)	246,512	729,744	795,000
British Columbia (1871)	366,255	817,861	1,138,000
Prince Edward Island (1873)	2,184	95,047	96,000
Alberta (1905)	255,285	796,169	895,000
Saskatchewan (1905)	251,700	895,992	874,000
Newfoundland and Labrador (1949)	152,734	295,440*	355,000
There are also two territories:			
Northwest Territories	1,304,903	12,028	16,000
Yukon	207,076	4,914	8,000
Total	3,843,144†	11,802,095	13,845,000

* 1938 est. † Including 228,307 sq.mi. of fresh water.

Language (1941): English (49·7%), French (30·3%), German (4%), Ukrainian (2·6%), Scandinavian (2·1%), Dutch (1·9%), Hebrew or Yiddish (1·5%), Polish (1·5%), other (6·2%). Religion (1941): Roman Catholic 4,800,895; United Church of Canada 2,204,875; Church of England 1,751,188; Presbyterian 829,147; Baptist 483,592; Lutheran 401,153; Greek Catholic 185,657; Greek Orthodox 139,629; Jewish 168,367; other 542,152. Chief towns: Ottawa (cap., pop., 1949 est., 162,442); Montreal (pop., 1949 est., 1,151,670), Toronto (pop., 1948 est., 695,302); Vancouver (pop., 1948, est. 376,000); Winnipeg (pop., 1948 est., 231,491); Quebec (pop., 1949 est., 200,555). Governor general, Viscount Alexander of Tunis; prime minister, Louis Stephen St. Laurent (*q.v.*).

History. Canada entered the second half of the 20th century independent in name and in law. Completion of the process of national evolution was in sight and, during 1950, federal and provincial representatives considered the task of formulating a distinctively Canadian constitution. The country's economy continued to be in the grip of a boom, with a boom's characteristic (and often painful) effects, but it also gave further evidence of "staying-power." The annual gross national product had risen from $5,500 million in 1935 to more than $17,000 million. Industrial employment had doubled since 1930. Underwriting the future were long-term factors, of which the increasing flow of oil from Alberta gave an earnest. Progressive exploitation of the country's vast mineral reserves seemed to promise that, long before the end of the 20th century, it would be one of the world's richest nations in terms of realized wealth.

Already Canada had achieved a position of influence in the world community, as a leading spokesman of the middle powers. In its relations with other members of the British Commonwealth, it saw itself as neither a senior nor a junior partner but as an equal among equals. It had become aware that, in placing it between Great Britain and the United States, history had charged it with a special responsibility for helping to devise and support sound international policies. In face of a dangerous international situation, Canada linked its defence production with that of the United States; accelerated its own defence programme and made provision for arms aid to western Europe. It passed legislation recognizing for the first time by statute the obligation of Canada to contribute overseas forces for collective defence under the United Nations charter and the North Atlantic treaty. Lester B. Pearson, minister of external affairs, proposed the creation of an international police force consisting of one or two full divisions under the United Nations banner. These divisions, it was suggested, would form a permanent force distinct from, and in addition to, the national armed force contingents which were serving (or would serve) with the United Nations in any emergency such as the Korea campaign.

Three Canadian destroyers, "Athabaskan," "Cayuga" and "Sioux," saw action with the United Nations forces in the blockade and successful assault on the coast of west Korea and played a major part in the evacuation of about 8,000 military personnel and civilians from Chinnampo in December, when they moved through the swept channel of a minefield and navigated 30 unlit miles of the shallow waters of the Daido Ko estuary in heavy seas and snowstorms. The first large unit of Canadian soldiers to join United Nations forces in Korea, the second battalion of the Princess Patricia's Light Infantry, landed at Pusan on Dec. 19. Montreal's "Thunderbird" squadron of the R.C.A.F. joined the Pacific airlift in July and flew North Stars, carrying U.S. reinforcements and supplies *via* the fog-girt Aleutians to Tokyo—bringing back wounded and non-combatants. By October there were some 500 Canadian air force personnel in the lift operation.

The Washington Agreement. On Oct. 26 in Washington, Canada and the United States signed a six-point agreement for co-ordination of their mutual resources for defence. The agreement, for an indefinite period, provided for:—(1) a co-ordinated programme of defence requirements, production and procurement; (2) co-ordinated controls over scarce raw materials and supplies; (3) emergency controls in both countries to be mutually consistent, with each agreeing to consult the other before making them law; (4) interchange of technical knowledge and productive skills; (5) removal of barriers impeding the flow of goods essential to the common defence; (6) consultation on financial and foreign exchange problems.

The Economic Picture. The cost of Canada's contribution to the common safety of the western world was estimated. It ran into huge figures but the nation was prepared to pay the price. An emergency session of the Canadian parliament passed the Defence Appropriations act, boosting defence expenditures for the year to a new peacetime peak figure of $670 million and providing for total additional commitments of $414 million.

In addition to heavy new liabilities for defence, Canada's economy met other handicaps during 1950. These included the rise in world commodity prices, a serious drop in Canadian exports to Great Britain and a nation-wide railway strike. Nevertheless, the economy remained buoyant throughout the year and, in spite of all immediate obstacles and perils, the country's rapid internal expansion continued. Capital



The funeral procession of William Lyon Mackenzie King, former prime minister of Canada, passing Union station, Ottawa, July 1950.

development and construction of factories, machinery and houses touched peak levels, Prices and the cost of living generally were at a record height. So was consumer spending.

Anti-Inflationary Measures. To counteract the dangers inherent in such a situation, the Canadian government pursued an anti-inflationary policy. During the summer and early autumn a flood of "hot money" was poured into Canada by the U.S. speculators, betting (correctly, as it proved) on an upward movement of the Canadian dollar. Canada's reserves of gold and U.S. dollars increased by more than $500 million during July, August and September. The influx of the U.S. money had the effect of augmenting inflationary pressure in Canada and increasing the country's capital debt to the United States, without any compensating growth in its capacity to produce or export. Something had to be done to check this "involuntary borrowing." Accordingly, after notifying the International Monetary fund, Douglas Abbott, the finance minister, announced on Sept. 30 the abandonment for an indefinite period of the fixed rate on the Canadian dollar. In the first day of "free" trading, the Canadian dollar gained nearly four cents in New York. Other anti-inflationary moves included a curb on instalment buying and the (largely psychological) gesture of an increase in the Bank of Canada's bank rate from 1½ to 2%.

Canada's foreign trade during the first eight months of 1950 produced a deficit of $14·3 million, compared with a surplus of $83·7 million in the corresponding period of 1949. Its traditional balance of debit with the United States and credit with the United Kingdom showed signs of levelling off. There was a gain of $320 million in Canadian exports to the U.S. in the first eight months of the year, and the adverse balance with that nation shrank from $389 to $90 million. On the other hand, Canada's shipments to Great Britain during the same period shrank by $155 million and its favourable balance with the U.K. was cut from $253 to $61 millions. The action of the United Kingdom, in continuing to restrict its imports of Canadian products, to save dollars, was again sharply criticized, and in a speech at Ottawa on Nov. 7 C. D. Howe, the trade minister, voiced "a rather firm demand" for increased British purchases.

The Canadian International Trade fair at Toronto was 40% larger than in 1949. Some 2,247 manufacturers from 33 countries exhibited at the fair, which was attended by about 35,000 business men.

The year saw the end of the four-year Anglo-Canadian wheat contract under which Canada shipped a total of 600 million bushels of wheat to Great Britain.

The country's inflationary spiral was, according to one authority, the basic cause of a nine-day Canada-wide railway strike, Aug. 22-31, one of the biggest railway stoppages ever to take place in North America. It was terminated by a special act of the Canadian parliament, assembled at Ottawa by a unique airlift operation. This was the Maintenance of Railway Operation act which, in the view of some observers, constituted a precedent for direct government intervention in industrial disputes. In December Mr. Justice R. L. Kellock, the final arbitrator, delivered his award, which granted among other things a seven-cents-an-hour wage increase to 124,000 railway workers and established the 40-hr. week, as from June 1, 1950, in the industry.

At their conventions, the two leading labour organizations took further vigorous action against Communist infiltration and passed resolutions looking to a greater measure of co-operation among Canadian trade unions.

In important parts of the prairie wheat-belt 1950 was a bad year, marked by disastrous spring floods in the Red river valley (*see* FLOODS AND FLOOD CONTROL) and early frosts and snow which damaged the large crop.

In October, E. C. Manning, premier of Alberta, opened the Edmonton-Regina section of a 1,127-mi. pipeline which would eventually carry oil to Superior, Wisconsin, for tanker shipment eastward through the Great Lakes. At that time, there were 55 million ac. of Alberta land under exploration and development, with more than 1,700 producing wells. Oil revenue, which had already been used to reduce the province's public debt by $56 million, was running at an average rate of more than $5·4 million a month. Other mineral discoveries during the year included new strikes of uranium in Ontario, Saskatchewan and British Columbia and additional iron deposits in northern Quebec. Nevertheless, despite the country's steadily growing wealth, the average Canadian found 1950 a somewhat difficult year, in which he experienced the sensation of being "hard up" under the impact of rising prices.

A former Canadian prime minister who, in the words of President Harry S. Truman, "brought his country to a new stature of greatness"—William Lyon Mackenzie King—died on July 22, aged 75, at his country home in the Gatineau hills (*see* OBITUARIES). On Dec. 10 the British prime minister, C. R. Attlee, conferred with the Canadian cabinet in Ottawa.

(L. BP.)

Education. Schools: provincially controlled (1948) 49,134, pupils 2,102,849, teachers 78,203; privately controlled (1947) 1,034, pupils 138,825, teachers 6,679. Indian schools (1947): 347, pupils 19,622, teachers 381. Universities and colleges (1949): 198, students 116,176, professors and lecturers 10,430.

Agriculture. Main crops ('000 metric tons, 1949; 1950 est. in brackets): wheat 9,999 (14,797); barley 2,621 (3,898); oats 4,903 (6,017); rye 254 (390); maize 347; potatoes 2,428 (2,912); sugar beets 872 (1,044); tobacco 63·4. Livestock ('000 head): cattle on farms (Dec. 1949) 8,243; sheep (Dec. 1949) 1,322; pigs (Dec. 1948) 4,604; horses (June 1949) 1,796. Dairy production ('000 metric tons, 1949; 1950, six months, in brackets): milk 7,614 (3,601); butter 126·0 (54·0); cheese 51·6 (17·6). Meat production ('000 metric tons, 1948; 1949 in brackets): total 918 (882) of which beef and veal 469 (450); pork 427 (413). Agricultural labour force (June 1950): total 977,000; farm operators 595,000; paid workers 114,000; unpaid family workers 268,000.

Fisheries. Total catch: landed weight ('000 metric tons, 1948; 1949 in brackets) 658 (605); landed value (1949) $82·1 million.

Industry. Industrial establishments (1947) 32,714; persons employed 1,131,750. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 15,648 (7,833); lignite 1,692 (875); natural and manufactured gas (million cu. m.) 2,497 (1,433); electricity (million kwh.) 46,668 (24,804); crude oil ('000 metric tons) 2,930 (1,620). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): iron ore, metal content, 3,468 (925); pig iron 2,148 (1,071); steel ingots and castings 2,892 (1,561); copper, refined, 206.4 (111.4); lead 132·0 (71·2); zinc 187·2 (90·5); nickel 116·5 (56·3); synthetic rubber 47·4 (28·5); gypsum, producers' shipments, 2,722 (1,148); asbestos, producers' shipments, 521·5 (355·5); gold ('000 fine ounces) 3,916 (2,196); silver ('000 fine ounces) 17,376 (9,066). Manufactured goods (1949; 1950, six months, in brackets): wood pulp ('000 metric tons) 7,697 (4,076); newsprint ('000 metric tons) 5,151 (2,594); cement ('000 metric tons) 2,520 (1,279); motor vehicles (thousands), cars 193·6 (138·6), commercial 99·0 (53·2); woven cotton fabrics (million m.) 246·0 (147·6); cotton yarn ('000 metric tons) 81·0 (48·7); wool yarn ('000 metric tons) 6·8 (3·6); sawn lumber (million bd. ft.) 5,289·6 (2,605·9).

Foreign Trade. (Million Canadian dollars, 1949; 1950, six months, in brackets) imports 2,760 (1,452); exports 3,024 (1,450). Main sources of imports (1939): U.S. 66%; U.K. 15%. Main destinations of exports: U.S. 41%; U.K. 36%. Main commodities imported (1939): machinery and vehicles 20%; iron and steel manufactures 11%; petroleum and products 7%; coal and products 6%; chemicals and allied products 6%. Main exports: wheat and wheat flour 14%; newsprint 13%; wood and manufactures 14%; aluminium and products 3%; lead, zinc and products 2%; nickel and products 2%.

Transport and Communications. Railways: (1948) 42,248 mi.; passenger-mi. (1949) 3,132 million; freight net ton-mi. (1949) 50,848 million; freight carried ('000 tons, 1949) 140,904. Roads (1947) 554,491 mi. Licensed motor vehicles (Dec. 1949): cars 1,650,641; commercial vehicles 544,288. Shipping (July 1949): number of merchant vessels over 100 gross tons including vessels for inland navigation 1,246; total tonnage 2,204,838. Air transport (1949): passengers flown 601,966; cargo carried 2,681,372 tons; air mail carried 3,154,973 tons. Telephones (1949): 2,230,597. Wireless licences (1948): 1,956,826.

Finance and Banking. (Million Canadian dollars) budget: (1949-50 actual) revenue 2,549, expenditure 2,438; (1950-51 est.) revenue 2,430, expenditure 2,410. Gross national debt (March 1949) 16,950. Currency circulation (Aug. 1950) 1,158. Bank deposits (Aug. 1950) 3,532. Gold and foreign exchange (million U.S. dollars, Dec. 1949) 1,122. Monetary unit: Canadian *dollar* with an exchange rate (Nov. 30, 1950) C.$ 2·93 to the pound and C.$ 1·048 to the U.S. dollar. Between Sept. 19, 1949, and Sept. 30, 1950, at which date the Canadian dollar was freed, the official rate of exchange was C.$ 3·08 to the pound and C.$ 1·105 to the U.S. dollar.

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CANADIAN LITERATURE. In 1950 four English-Canadian novelists used contemporary themes to treat of various Canadian areas: Thomas H. Raddall's *The Nymph and the Lamp* was laid on Sable island off Nova Scotia: Stanley C. Tiller's *Stormswept* described Newfoundland life; Edward McCourt's *Home Is the Stranger* and Flos J. Williams' *Fold Home* both dealt with western Canadian prairies. Grace Campbell reported the problems of a village church minister in *The Tower and the Town*. Historical novels included Louis Vaczek's panoramic *River and Empty Sea*, based on the Canada of the late 1600s; W. A. Plenderleith's lively *Conflict*, going back to the American Revolutionary War; Harwood Steele's *Ghosts Returning*, a brisk account of red-coated mounted police work on the prairies in 1889. There were English translations of two major 1949 French-Canadian novels, *The Plouffe Family* by Roger Lemelin and *The Outlander* by Germaine Guevremont, translated by Eric Sutton.

There were a number of books about aspects of World War II. Wilfrid Eggleston reported *Scientists at War*, Scott Young described the Salvation Army's *Red Shield in Action*, Joseph Schull sailed *The Far Distant Ships* of the Canadian navy, R. M. Hickey recalled *The Scarlet Dawn* of his chaplainship and Robert England analysed the sociological problems of *Twenty Million World War Veterans*. There were side lights of the war in *Canada in World Affairs: September 1941 to May 1944* by C. C. Lingard and R. G. Trotter and in *Canada in World Affairs: From Normandy to Paris, 1944-1946* by F. H. Soward.

The rest of the 1950 crop of non-fiction books was varied. Dean E. McHenry's *The Third Force in Canada* was a detailed political study of the Co-operative Commonwealth federation (the Socialist party); W. L. Morton's *The Progressive Party in Canada* similarly studied the agrarian revolt on the prairies in the 1920s. History was prominent and included *The Changing Commonwealth* by F. H. Soward and *A Short History of Canada* and *A History of Canadian External Relations* by G. P. de T. Glazebrook.

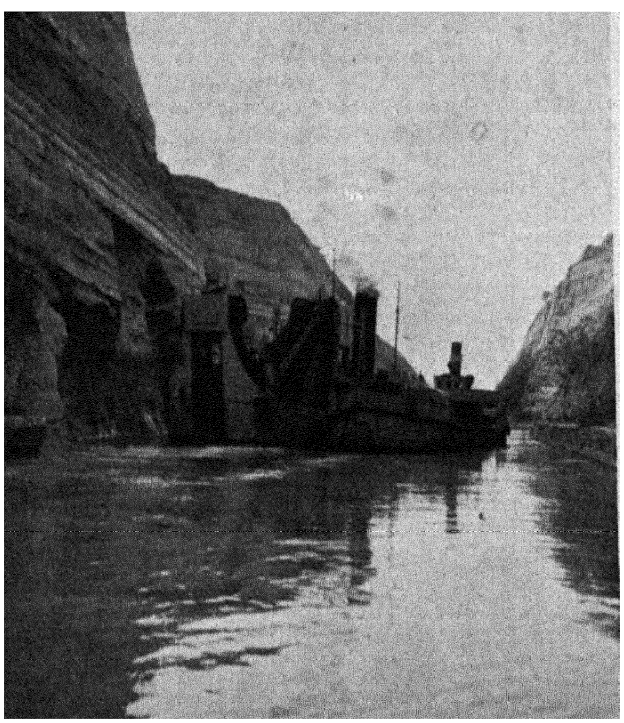
The leading books of poems included James Wreford's *Of Time and the Lover*, Edna Jacques's *Fireside Poems*, J. A. Ross's *The Singer and His Song* and Hyman Edelstein's *Spirit of Israel, and Other Poems*. Robertson Davies' rousing *At My Heart's Core*, set in the Ontario of 1837, was the only play published.

The year 1950 saw the heaviest and best crop of boys' and girls' books ever published in Canada. Fiction with outdoor settings and action were the most popular: *Fire Patrol* by Dickson Reynolds (Helen D. Reynolds) was about forest fire-fighting; *The Cave at Cormorant Lake* by Frank L.

Houghton centred around World War II spies at Halifax; *Abitibi Adventure* by Jack Hambleton had a pulp and paper mill as its theme; *The Mystery Horse* by Louise Riley featured ranching on the prairies; and *The Silent Gulls* by G. E. Tait described game protection along the shores of Lake Huron. T. H. Raddall's *Son of the Hawk* went back to Nova Scotia in 1770, and George F. Clarke's *David Cameron's Adventures* went back to early New Brunswick; both were gripping historical novels. Juvenile non-fiction books included a number about people, such as *Canadians*, the lives of 20 great Canadians, by L. J. Henry and *Bay of the North*, the life of Pierre Radisson, by R. Syme. L. Knott's *The Children's Guide to Calgary* was packed with western prairie and foothill lore. (C. Cy.)

CANALS AND INLAND WATERWAYS.

In Aug. 1950 the British Transport commission made its second annual report to the minister of transport, covering the year 1949. A disappointing revenue position was disclosed. In the interests of economy and to eliminate overlapping services the integration of rail, road and inland



Dredging operations in the Corinth canal, which was being restored in 1950 with funds provided under the European Recovery programme.

waterway services was pressed forward as rapidly as circumstances would allow. A charges scheme for merchandise traffic was considered and a draft outline of principles prepared -such principles to be common, wherever possible, to all three services, in particular for classification, conditions of carriage, regulations and chargeable distances.

The Transport commission's report made a useful distinction between canal-owning, on the one hand, and waterway-carrying on the other. On canal-owning in 1949, the commission spent £1,900,000 in working expenses and secured £1,800,000 in gross receipts; in the business of waterway-carrying working expenses amounted to £800,000 and gross receipts to £700,000. The deficiencies thus revealed were before reckoning appropriate proportions of the commission's central charges. The commission had added to its fleet by purchasing 172 craft from Fellows, Morton and Clayton, Ltd., on Jan. 1, 1949. The net deficit on the year's working (in waterway-carrying) was £86,000 compared with £66,000 in 1948. In canal-owning, the deficiency was slightly reduced. The drought that occurred in 1949 had an adverse effect upon canal-owning revenue, which came mainly from tolls. The closing by the National Coal board of colliery basins on the Staffordshire and Worcester section of the waterways also reduced the tolls.

France. Co-ordination and reconstruction schemes were developed—and in some cases implemented—to repair war damage to the waterways and also to permit the passage of much larger barges. Certain canals which connected Belgium, Paris and Strasbourg were to accommodate barges of 600 tons and even 1,350 tons as against the old French canal limit of 300 tons. The schemes included major construction projects at the following locks: Jeu de Mail, near Dunkirk; Flandres and Fontinettes, near St.-Omer; Dow, between Lille and Lens; Grand Carré at Lille; and Lens.

Netherlands. In 1949 figures were published in Holland showing that inland shipping traffic in 1948 was appreciably higher than in 1947 but still a long way below the prewar level: approximately 24,000 vessels arrived from Belgium, Germany, France and Switzerland, compared with 15,000 in 1947 and 50,000 in 1938.

Western Germany. Traffic through the Kiel canal during Sept. 1950 reached a postwar record of 1,790,382 tons, representing 3,670 vessels of which 2,936 were German, 356 Norwegian, 219 Danish and 159 Finnish. (A. H. J. B.)

United States. In the U.S. there was an appreciable increase in the number of commodities shipped as water-borne freight. The principal new traffic came from the rapidly expanding chemical industry. Many new products originated in Texas and the southwest, and through the ports of Mobile, New Orleans and Houston-Galveston. There was a spectacular increase in the barge transport of new motor cars from mid-west to southern cities.

According to preliminary estimates, the total net water-borne commerce of the U.S., eliminating all known duplications of traffic between rivers and ports, was 740,044,573 short tons in 1949. United States water-borne commerce on the Great Lakes totalled 145,591,636 tons, aggregating 97,503 million ton-miles. Inland waterway commerce, excluding the Great Lakes, totalled 41,892 million ton-miles, including the deep sea traffic on the Mississippi river below Baton Rouge, Louisiana. Of this total, the Mississippi river system accounted for 27,399 million ton-miles.

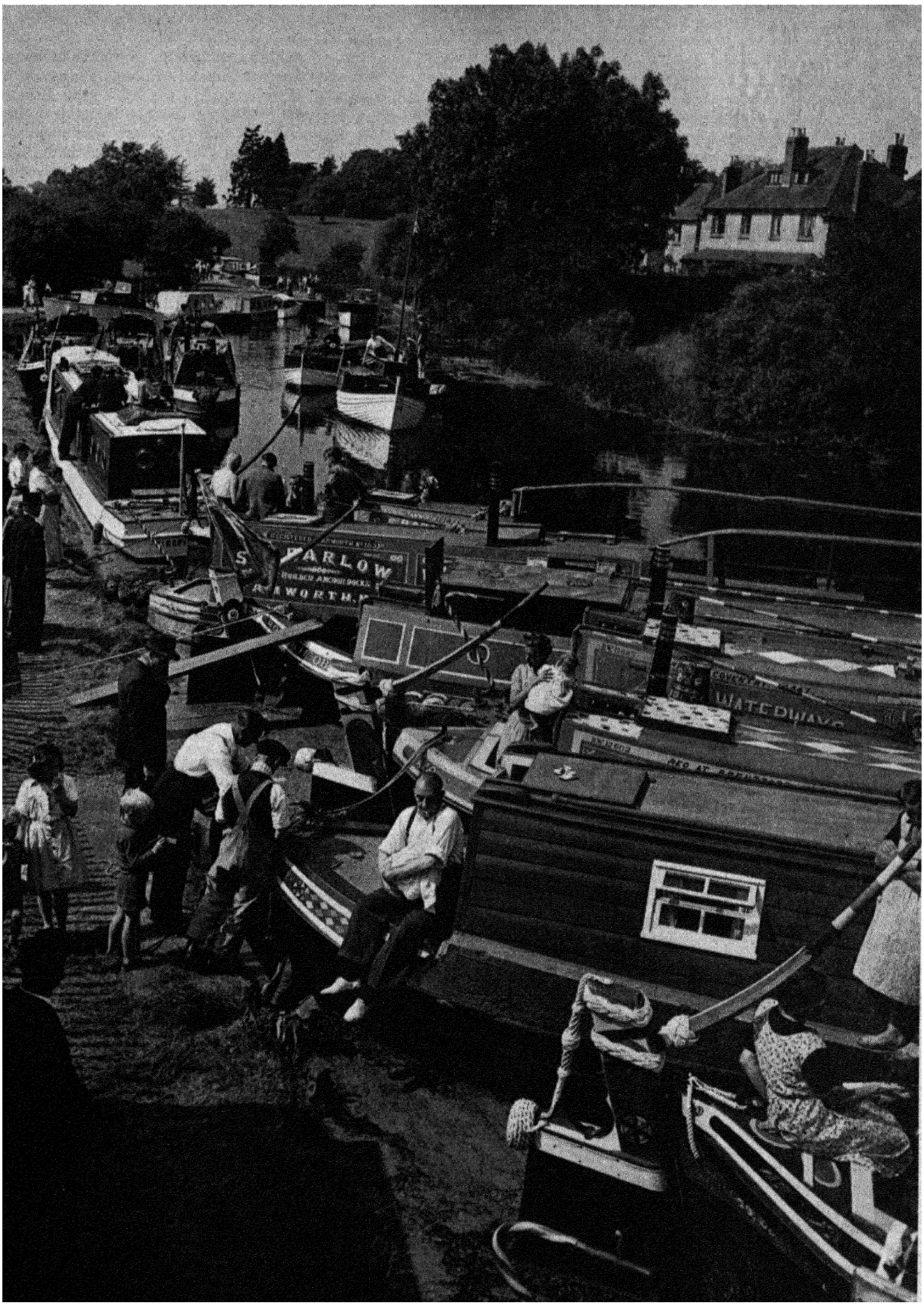
Canada. Renewed public attention was given to the proposals for a St. Lawrence seaway and power project. The implementation of these schemes would enable the large lake carriers to come down to Montreal (they are now prevented from doing so by a short series of 14-ft. draft canals): iron-ore carriers would be enabled to move westwards: and great new supplies of water power would be made available for industrial and strategic purposes. Favourable pronouncements upon the schemes were made by President Truman of the United States and by Lionel Chevrier, Canadian minister of transport.

Pressure to create a canal through the Chignecto isthmus between Nova Scotia and New Brunswick was increased by the formation of the Chignecto canal committee, which presented a brief to the federal government urging action on the project.

Canal traffic tonnages for the April-Oct. 1949 navigation season (with 1948 tonnages for the same period in brackets) were: Sault Ste. Marie (Canadian-United States) 93,280,572 (91,420,487); Sault Ste. Marie (Canadian only) 1,886,881 (1,979,080); Welland 12,400,905 (11,699,335); St. Lawrence 8,648,438 (6,993,058).

See British Transport Commission, *Report and Accounts for 1949* (London 1950).

A collection of river and canal craft seen at the first festival of boats at Market Harborough, Leicestershire, Aug. 1950.


ARLOW

CANASTA. This new card game from South America, while not repeating in Europe the phenomenal success that it had in the United States in 1949, established a firm hold among card players in many cosmopolitan centres. In England it was played mostly in London and the Home counties. As was inevitable in a new game of divers origins, there were many variations of the rules. Official laws were published in the U.S. by the Regency club of New York. The Canasta committee of Crockford's club, London, drew up a code based on the Regency club's laws but different from them in some important respects. This was published by the *Sunday Times* and by the end of 1950 had come to be regarded as constituting the standard rules for Great Britain.

Canasta is a Spanish word meaning "basket"; the term expresses the way in which cards are "woven" together to make a "canasta."

Canasta is primarily a four-handed partnership game, but there are variations for two, three, five and six players. Two packs of cards and four jokers are used. The game belongs to the rummy family. In the four-handed game each player is dealt 11 cards and at his turn to play draws from the stock and discards face upwards. Three or more of a kind can be put down on the table. This is called "melding," from a German word meaning "announce." Most points are scored by building up canastas; *i.e.*, melding seven of a kind.

When a player has cards in his hand that match the last discard by his opponent, he can, in certain circumstances, pick up the entire discard pile, thus acquiring extra cards. It is this struggle for the pack that gives canasta its inimitable excitement.

Answering in the London *Observer* the question "Will Canasta last?" Terence Reese wrote: "Yes. A gambler's heaven, it is quite difficult enough to stimulate the mind as well." (T. RSE.)

CANCER. For years students of cancer had attempted to discover the cause of cancer, that is, the reason for the changes, and what these minute changes are, which enable cells to grow freely in the body without normal tissue controls. Changes in chromosomes of the tissues of the body were accused of undergoing a variety of alterations which it was assumed were responsible for the growth capacity of the cancer cell, but during 1950 this theory was seriously challenged by S. Timonen and E. Therman in a study of the changes in the mitotic mechanism of cells in normal human tissues.

Normal human cells were obtained by curettage of the healthy endometrium and compared to cells from human malignant tumours. It had been considered characteristic of neoplastic tissue that more cells divide than in corresponding normal tissue. But in the endometrium the frequency of mitosis is about the same as in cancer tissue. The chromosomes of normal tissues showed many alterations which were though to be characteristic of cancer. Comparison of the two types of tissue showed that in cancer there are a greater number of alterations in number and structure of the chromosomes, but these may be duplicated in normal tissues. Actively dividing cancer cells display chromosome numbers ranging from 12 to a high number, but these are also seen in normal structures. While the most constant feature characterizing all cancer cells is the general acceleration in the division rate, this is present also in normal structures. Accelerated speed in chromosomal division is the most evident difference in relation to the slower rate of intra-chromosomal changes. The investigations therefore suggested that the origin of cancer is not in the chromosomes but in those structures known as plasmagenes, on which C. D. Darlington wrote. W. R. Earle and his associates had shown several years before that cells from normal tissues, if cultivated over a considerable period of time, would assume all the capacities of cancer cells.

Cytologic Diagnosis. Another subject of wide interest was the extraordinary development of cytologic diagnosis of accessible cancers. This technique permitted a great increase in diagnosis of early types of accessible cancer including cancer of the lung, which had almost always been diagnosed too late for effective therapy, cancer of the throat and especially cancer of the pelvic organs where smears can be taken of the surface cells of a growth from the rectum, cervix and so on. It was obvious that when a diagnosis is based upon a smear only the possibility of error is greater than when an actual piece of tissue is obtained, but the patient with a positive smear diagnosis was usually willing to have a small surgical biopsy to confirm the diagnosis before extensive or mutilating surgery was done. (*See* also SURGERY.)

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CANNING INDUSTRY. Canning in 1950 was limited by the continued shortage of tinplate, but new tinplate plant was under construction or planned in the U.S.A., south Wales, Australia, South Africa, France, the Netherlands, Belgium and Spain. Figures published during the year by the Ministry of Food showed that the production of canned fruit in the United Kingdom increased from 45,200 long tons in 1947 to 89,100 tons in 1949, and of canned vegetables from 242,200 tons in 1947 to 300,800 tons in 1949. Canned soup production fell from 114,100 tons to 71,200 tons, but canned homogenized baby-foods increased from 4,300 tons to 7,200 tons. The canning packs of the following countries in 1950 were roughly proportional to their tinplate consumption figures, which were (long tons): United Kingdom 440,000; Canada 190,000; Australia 110,000; South Africa 48,000; Western Germany 140,000; France 120,000; Netherlands 75,000; Italy 55,000; Denmark 30,000; Belgium 25,000; Norway 20,000; remainder of Europe 75,000. The sardine canning industries of Spain and Portugal declined because the fish appeared to have forsaken their usual haunts, but sardine canning revived in Cornwall and in Morocco.

A new can-making factory with a capacity of 300 million cans yearly was built in Canada by the American Can company to meet Canada's increasing production of canned fruits and vegetables.

The Commonwealth Scientific and Industrial Research organization investigated the distribution in southeastern Australian waters of tuna, pilchards and other fish for canning. A steady increase in fish canning was noted in Western Australia, but the Tasmanian industry experienced difficulties when the British Ministry of Food ceased to import canned barracouta. The market for dried apples diminished and several factories in Tasmania switched to canning.

In South Africa, the output of canned fish, fish oil and fish meal continued to rise and reached an annual value of £2 million. The record production of 5·5 million 30-oz. cans of pineapple was reached. The range of canned foods was extended to include such tropical fruits as pawpaws, mangoes and guavas. The Deciduous Fruit board made a grant of £8,000 and South African canners were invited to contribute a similar amount towards a pilot research cannery. At Thika, Kenya, a new pineapple cannery opened with an annual capacity of 20 million cans. The British government

planned to set up cattle ranches, a canning factory and cold storage in Bechuanaland. A new cannery, costing £500,000, with a capacity of 80,000 cans of beef daily, was opened in Tanganyika in September. (G. H. M.F.)

United States. Canned fruits, juices, vegetables, fish, milk and fruit and vegetable specialities in 1950 totalled about 560 million standard cases (preliminary estimate) compared with 534 million standard cases in 1949.

The International Tin Study group estimated the world production of metallic tin for Jan.-June 1950 at 86,000 long tons with consumption at 70,700 tons during this period. Estimated production and consumption for 1950 were 165,000 tons and 139,000 tons, respectively. Production and consumption for the year 1949 were 168,800 tons and 119,200 tons, respectively.

Technological developments in the canning industry showed marked advance during 1950. In particular, attention was directed toward the perfection of equipment adapted to the purpose of "high temperature - short time" processing. Most existing equipment of this kind utilizes the principle of rotation or agitation of can contents during processing. Other types involve rapid treating of homogeneous products followed by handling of the sterilized product and sealing of the cans under aseptic conditions. (E. J. C.)

CANOEING. There were entries from all parts of Great Britain for the national championships in canoe slalom held on the Eden at Armathwaite in May 1950. The winner was M. Smith of the Tay Canoe club, with D. Pegram of the Manchester C.C. and D. Taylor of the Royal C.C. second and third respectively. Canoe slalom, a fast water competition, is not yet widely known in Britain. The women's event was won by E. E. McLellan, with K. Tootill and M. Millner second and third respectively.

The national paddling championships were held on the Thames at Teddington on June 3-4 and Sept. 9-10. A. W. J. Simmons of the Royal C.C. successfully defended his titles in kayak singles over the distances 500 m., 1,000 m. and 10,000 m., as did Joyce B. Farnham of the same club in the 500 m. W. Churm of the Canoe Camping club, a newcomer to kayak racing, took second place in the 10,000 m. and 1,000 m. and T. W. Hezseltine of the same club second place in the 500 m. Joyce M. Webb, runner-up to Joyce Farnham in 1949, retained that position and showed great promise. The competition in kayak pairs was less interesting, since there are few craft of this class in Britain. Simmons and C. E. Farnham of the Royal C.C. won the 10,000 m.; there was no contest at 1,000 m. or 500 m.

G. D. Marchand retained his title in the 1,000 m. Canadian singles and also won the 10,000 m. event: he was never seriously challenged in either race by the second man, R. R. Thornton.

A new championship event was the 4 x 500 m. relay race for kayak singles. The Canoe Camping club was the winning team, with the Royal Canoe club second. (J. W. D.)

CANTERBURY, ARCHBISHOP OF (FISHER, GEOFFREY FRANCIS), 100th archbishop of Canterbury, primate of all England (b. May 5, 1887), was educated at Marlborough college, Exeter college, Oxford, and Wells Theological college. He was assistant master at Marlborough (1911) and was ordained deacon (1912) and priest (1913) at Salisbury. In 1914 he became headmaster of Repton school in Derbyshire. In 1917 he married Rosamond Chevallier. In 1932 he was consecrated bishop of Chester; and in 1939 he was translated to London, where his administrative ability left a great impression. On April 19, 1945, he was enthroned as archbishop of Canterbury, in succession to Dr. William Temple.

In Feb. 1950 the archbishop sent a memorandum to the Royal Commission on Capital Punishment urging that a distinction should be drawn between murder, to which a capital penalty would apply, and murder committed under extenuating circumstances, to which it would not apply. He replied sympathetically to the Russian Orthodox patriarch's peace appeal, but advised the clergy against signing the petition of the British Peace committee. Later he warned against the tyranny of atheistic and imperialistic communism. In March he welcomed the Vatican statement on co-operation and especially the opportunity created for discussion between the churches; but in August, together with the archbishop of York, he issued a statement criticizing the forthcoming declaration by the Vatican of the dogma of the bodily Assumption of the Blessed Virgin Mary. On Sept. 22 he sailed for an extensive tour of the Australian and New Zealand churches. (A. J. MAC.)

CAPE VERDE ISLANDS: *see* PORTUGUESE COLONIAL EMPIRE.

CARIBBEAN COMMISSION. An advisory body set up in Oct. 1946 by an agreement between the four countries —France, the Netherlands, the United Kingdom and the United States—that are responsible for the administration of non-selfgoverning territories in the Caribbean area. It superseded the Anglo-American Caribbean commission which had been established in 1942; and was formed with the stated aim of "encouraging and strengthening co-operation" among the member governments and their territories "with a view towards improving the economic and social well-being of the peoples of those territories and . . . of promoting scientific, technological and economic development in the Caribbean area." A further function of the commission was to facilitate research on a co-operative basis and eliminate duplication of research. The commission had two subsidiary bodies: the Caribbean Research council which advised the commission on scientific and technical matters, and the West Indian conference which assembled every two years and provided a forum at which representatives of the peoples themselves could discuss social and economic matters of common interest. The commission consisted of 16 commissioners, four from each of the member governments. It maintained a secretariat at Port of Spain, Trinidad, and met twice yearly. The commission's 10th session was held in Martinique in June 1950 and the 11th at Curaçao in December.

The Research council consisted of from 7 to 15 members selected by the commission for their special qualifications, and it was assisted by a number of technical sub-committees. Among its chief activities was the publication of the *Yearbook of Caribbean Research*, a valuable guide to the research work of all kinds that was being carried on throughout the area. The council and its sub-committees held a joint meeting in Trinidad in May 1950. Other meetings of experts held directly or indirectly under the auspices of the Caribbean commission during the year were devoted to meteorology, soil science, livestock and trade statistics.

The commission continued the publication, in English and French, of its monthly bulletin containing reports of its activities' and news of important developments in the Caribbean territories. It also inaugurated the publication of the *Caribbean Economic Review* which was designed to contain articles of exceptional interest on matters of economic significance. In July 1950 a joint statement was issued containing the interim views of the four member governments on the role of the Caribbean commission in technical assistance programmes to be carried out in the area.

The West Indian conference held its 4th session at Curaçao in December, the theme of the meeting being agriculture.

Agricultural scientists of the four member nations and others attached to the Food and Agricultural organization presented papers which were discussed by the assembled delegates.

The four co-chairmen of the Caribbean commission at the end of the year were E. A. P. de Beauverger (France), Hendrik Riemens (Netherlands), Sir George Seel (U.K.) and Ward M. Canaday (U.S.). The secretary general was Lawrence W. Cramer. (P. H.-M.)

See Sir Harry Luke, *Caribbean Circuit* (London, 1950).

CAROLINE ISLANDS: *see* TRUST TERRITORIES.

CARTOGRAPHY. A striking feature of cartography in 1950 was the widespread use of survey methods which had only been perfected during and after World War II. A modification of radar navigation methods known as "Shoran" was found by the Canadian Survey department to be of considerable service in the task of extending the triangulation which must necessarily precede accurate topographical mapping. It depended on the measurement of the lengths of sides of triangles by means of the time taken for an electrical impulse to travel from an aircraft flying across a line to reflecting apparatus at its ends and back to the aircraft. Provided that the sides measured were not less than 200 mi. long, its accuracy corresponded to that of normal secondary triangulation, the error being approximately 15 ft. regardless of the distance measured. These large triangles then had to be broken down by normal ground survey methods. A network extending for 1,100 mi. from southeastern Manitoba to Saskatchewan and Alberta was largely completed.

The Directorate of Colonial Surveys set up at the end of World War II to co-ordinate and augment the work of the various colonial survey departments again increased considerably its output of new maps. These included maps of parts of most of the African colonies, Malaya, Sarawak, North Borneo, Jamaica and the Falkland Islands dependencies. Most of them were preliminary plots prepared from air photographs. They showed almost all significant plan detail including settlement, communications, and in many cases vegetation and cultivation, but no contours. The photographs were provided by the R.A.F., which maintained a photographic reconnaissance squadron, equipped with radar control continuously at the disposal of the directorate.

In Great Britain research was continued by the Ordnance Survey into problems connected with the use of air photographs in revision of large scale maps. For the plans of urban areas on a scale of 1:1,250 not more than 20% of the detail could be obtained from them. But for the 1:2,500 up to 80% could be plotted and virtually all the information for the revision of the one-inch map came from this source. The survey of low-water mark on the six-inch scale presented a special difficulty in that it could only be conducted during the short time when the tide was exactly at the right level. Air photography was applied to this problem with considerable success and in areas of mud and sand it became standard practice. Investigation also continued into the best means of inserting contours at intervals of 25 ft. on the six-inch and 1:25,000 maps. A large number of new sheets of the latter series were published, virtually completing it for England, with the exception of western Cornwall. Large gaps remained in Wales and Scotland.

An entirely new project, a world-wide survey of land use, was first discussed at the International Geographical congress in Lisbon in 1949. A commission of the International Geographical union set up to study the question made its first report early in 1950. Since the contemporary utilization of land formed a good index to its fertility and potentialities for other types of production, it was proposed to initiate a universal survey of land use and to record the results on maps for easy and accurate reference rather than as statistics. It was recommended that the work should be the responsibility of local national organizations and should be conducted by specially trained field surveyors, assisted in suitable localities by aerial photographs. The maps should be on a sufficiently large scale to show all necessary detail, but for publication they should be reduced to a uniform scale of 1:1,000,000. A uniform system of classification and cartographical presentation was also regarded as necessary, and after careful consideration a scheme was adopted.

A commission on the *International Map of the World* was also at work considering whether any changes were required in the organization for the production of this map. The desirability of integrating the Central Bureau of the International Map with the United Nations and the question of producing outline maps, to carry geographical overprints, from existing plates were investigated. (A. M. F.)

CATTLE: *see* LIVESTOCK.

CELEBES: *see* INDONESIA.

CELLULOSE PRODUCTS: *see* PLASTICS INDUSTRY; RAYON AND SYNTHETIC FIBRES.

CENTENARIES. At Repton, Derbyshire, in June, 1950, a series of celebrations marked the martyring exactly 1,100 years before of Wystan, a Saxon prince and son of the king of Mercia, and in July celebrations were held by the Huguenot Society of London to record the 4th centenary of the granting of the royal charter to the Huguenots by King Edward VI on July 24, 1550.

The Queen unveiled on June 20 a window in the Chapel of the United College of St. Salvator and St. Leonard, St. Andrews, to commemorate the founding in 1450 of the college of St. Salvator. Trinity hall, Cambridge, recorded the 6th centenary of its founding. New college, London, a divinity school of London University, also commemorated the centenary of its foundation from three former colleges.

In June the King and Queen attended the celebrations at Sherborne school, Dorset, to commemorate the granting of its new charter in 1550. Bradfield college, Berkshire, marked its centenary and, also in June, King's school, Bruton, Somerset, celebrated the 400th anniversary of its refounding by Edward VI. Princess Margaret visited St. Edmund's school, Canterbury, for the bicentenary celebrations of the Clergy Orphan corporation, which had been postponed from 1949.

Other school anniversaries celebrated in 1950 included Doncaster grammar school (600 years), Truro and Whitchurch grammar schools and King Edward VI school, Stafford (400 years), Wem grammar school, Salop (300 years), Mayfield village school, Sussex (200 years), North London Collegiate school for girls, Loughborough high school and St. Michael's school, Limpsfield, Surrey (100 years).

Religious centenaries included the 900th anniversary of the founding of the see of Exeter. The King and Queen and Princess Margaret attended evensong in the cathedral on July 10. The centenary of the restoration of the Roman Catholic hierarchy of England and Wales was marked by a congress. Nantwich parish church celebrated its 600th anniversary and All Saints', Ringsfield, Suffolk, its 5th centenary.

Two literary centenaries were commemorated: William Wordsworth's death at Rydal Mount on April 23, 1850, and the birth of Robert Louis Stevenson in Edinburgh on Nov. 13, 1850. Another anniversary was the bicentenary of the death at Leipzig on July 28, 1750, of J. S. Bach.

The 100th anniversary of the passing of the first public libraries act was commemorated in 1950 (*see* LIBRARIES). Also in 1850 was laid the first submarine telegraph cable across the English channel; the centenary was noticed by

a special British television programme from Calais. The year 1850 had been one of great activity in the expanding of the railway systems of Britain. Many of these recorded their anniversaries in 1950. On Aug. 7, the centenary of the opening of the east-coast route to Scotland, the driver of the Flying Scotsman carried a wooden plaque bearing the arms of the old east-coast joint-stock from King's Cross to the station master at Edinburgh. Other centenaries were those of the Britannia bridge, the Fleetwood, Preston and West Riding junction railway, the Huddersfield and Sheffield junction railway and, in France, the Metz-Nancy railway.

The Coldstream Guards celebrated the 300th anniversary of their formation. In 1850 the first of the settlers who founded the province of Canterbury, New Zealand, reached Port Lyttelton; the celebrations in New Zealand, inaugurated by the governor general, Sir Bernard Freyberg, in August, lasted four months. New Zealand also marked the 600th anniversary of the arrival of the Maoris.

Other 1950 anniversaries included the creation of the bowler hat in 1850, the birth of Christopher Columbus at Genoa in 1450, the birth of Thomas Masaryk in 1850, the death of General San Martín in 1850, the founding of Oslo (*q.v.*) in 1050, the founding of Helsinki (*q.v.*) in 1550, the founding of Gliwice, Poland, in 1250, the founding of Colchester as Colonia Claudia Victricensis in A.D.50 and in the same year the founding of Cologne under the title of Colonia Claudia Ara Agrippinensis.

CENTRAL AFRICAN COUNCIL. The decision to form the Central African council was taken in Oct. 1944 and the first meeting held in the following year. Membership comprised representatives of Southern Rhodesia, Northern Rhodesia and Nyasaland (*qq.v.*). Permanent committees were established to deal with communications, industrial development, research and other such subjects. Much useful work was done at a meeting of the council on Jan 25, 1950. Southern Rhodesia gave notice that it would be unable to continue membership after the end of the year. A committee composed of two representatives of each territory was set up under the presidency of T. H. Beedle, Southern Rhodesian minister of internal affairs, to examine machinery for inter-territorial co-operation. This committee recommended the formation of a Rhodesia-Nyasaland secretariat and an inter-territorial conference. The secretariat would facilitate discussion on matters of common interest raised by any territory or by the secretariat itself and keep all governments informed of the action eventually decided upon by the individual governments. The conference would comprise the prime minister of Southern Rhodesia and the governors of the other two territories, supported by other representatives when necessary, and would control the secretariat. It would meet at least once a year. These bodies would be consultative only and decisions would not be binding on the three governments.

These recommendations were accepted on May 1 by the governments of all three territories. They were also to send representatives to London early in 1951 to take part in discussions on closer association. (G. R. MN.)

CEREALS: *see* GRAIN CROPS.

CEYLON. Self-governing member of the Commonwealth of Nations, lying off the southern extremity of India and approaching to within 6° N. of the equator. Area: 25,322 sq.mi. Pop.: (1946 census) 6,693,945, (mid-1950 est.) 7,500,000. Language: mainly Sinhalese (69%) and Tamil (21%). Religion: Buddhist (61%), Hindu (22%), Moslem (9%) and Christian, mainly Roman Catholic (7%). Chief towns (pop., 1946 census): Colombo (cap., 362,000); Jaffna (63,000); Dehiwala-Mt. Lavinia (56,000); Kandy (52,000). Governor general, Lord Soulbury; prime minister, Don Stephan Senanayake (*q.v.*).

History. At the opening of the year the government of Ceylon announced its decision to recognize the Chinese Communist government at Peking. This decision, according closely with the policy of the United Kingdom and India, was not unexpected. The prime minister thus strengthened himself against the criticisms of the opposition, the largest party of which consisted of Communists, split into so-called Stalinist and Trotskyist groups.

In September the government showed that although it had decided to recognize the new Chinese government, it was not prepared to give undue encouragement to the Communist-led Ceylon Trade Union federation, and consequently applications for visas by Communist delegates from the U.S.S.R., France, China and other countries to attend its congress were refused.

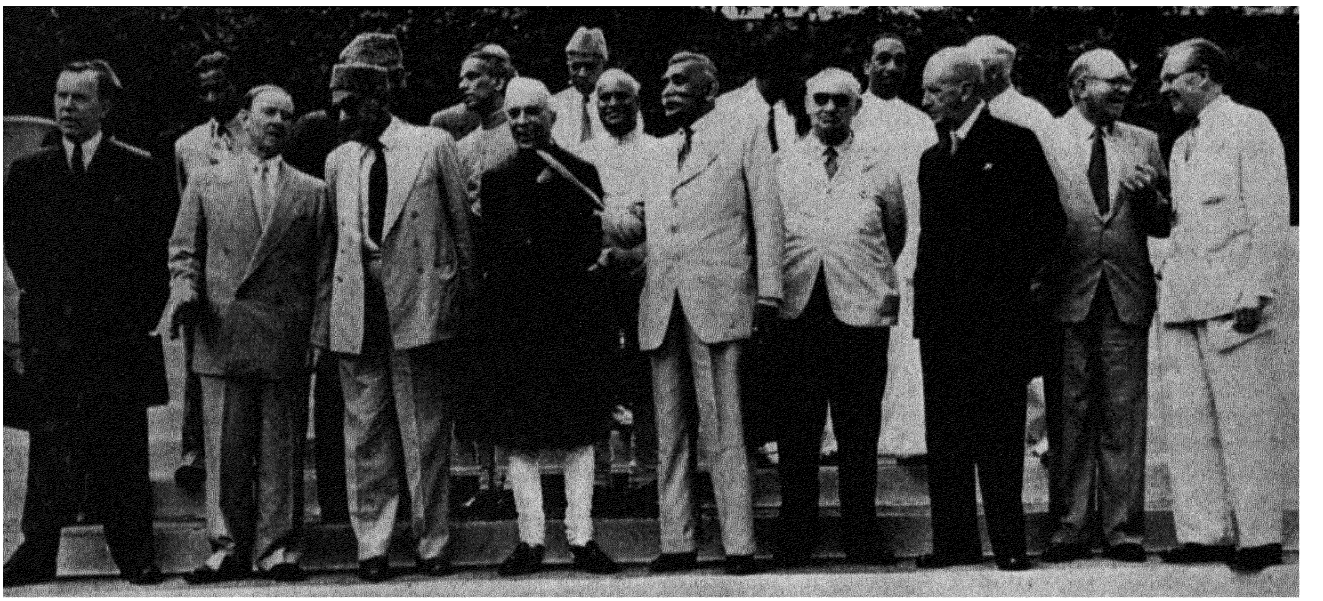
In January the visit of the prime minister of Burma, Thakin Nu, was greeted with enthusiasm, in view of the close ties of religion between the two countries. In February an important visitor was Philip C. Jessup, the U. S. ambassador-at-large, who emphasized that the United States was not building up a military alliance in Asia, but had in southeast Asia an interest which was partly economic and partly philanthropic. Its assistance would be given only if asked for by the governments concerned and where the Communist menace hindered national aspirations.

In Sept. 1949 the Earl of Caithness, then military adviser to the Ceylon government, was appointed commander in chief of the Ceylon army, and under his direction in 1950 the necessary steps were taken for putting the land, anti-aircraft and coastal defence forces in the island in the position to take over from the British army in Ceylon. The strength of the Ceylon army was expected eventually to reach that of 3,000 officers and men. In 1950 the figures were 70 officers and 610 men. The officer cadre would be strengthened by the arrival of Ceylonese cadets after their training at Sandhurst.

The finance minister, J. R. Jayawardene, presented the budget on July 20. Changes in taxation included an additional 15 cents per lb. on the export duty on both rubber and tea, bringing the total export duty to 53 cents per lb. and the export duty on pepper was increased by Rs. 2 per lb. This was designed to meet the extra subsidies on rice and flour and curb inflationary pressure resulting from high prices on tea, rubber and coconut produce. On the other hand customs duty was reduced on a wide range of consumer goods. In regard to income tax the limit of exemption was raised, thus relieving 35,000 people from taxation, and the basic unit rate of income tax was raised from 8½% to 9%. The supertax on larger incomes was slightly increased and the companies tax was raised from 25% to 27%.

The economy of the island was dangerously dependent on the fluctuation of world prices over a limited range of commodities—tea, rubber and coconut accounting for 90% of the total exports of the island. The government's programme to increase economic stability included proposals for increasing food production and devising other forms of employment. Plans were framed for spending £102 million on development, according 37% of the sum to agriculture, 22% to transport and communications, 27% to social services, 8% to power and 6% to industry.

The balance of payments in 1950 was expected to show an estimated surplus of Rs.100 million—a definite improvement on the Rs. 28 million deficit of 1949; but it was obvious that the avoidance of deficits in future years would be a matter of difficulty and dependent on unpredictable factors. The need for a higher level of capital investment thus became plain.



The chief delegates to the conference of Commonwealth foreign ministers at Colombo, Ceylon, Jan. 9-14, 1950. Left to right, L. B. Pearson (Canada), P. C. Spender (Australia), Ghulam Mohammad (Pakistan), Jawaharlal Nehru (India), D. S. Senanayake (Ceylon), Ernest Bevin (Great Britain), F. W. Doidge (New Zealand), P. O. Sauer (South Africa) and P. Noel-Baker (Great Britain).

The Colombo Plan, In 1950 Colombo was the scene of an important conference of the Commonwealth countries' foreign ministers to discuss the economic development of south and southeast Asia in the maintenance of the political stability of that area. This Colombo conference brought into existence the Commonwealth Consultative committee, which met at Sydney in May. As a result a plan was drawn up for a six-year period to run from the middle of 1951 to carry out the objects of the committee's proposals. The scheme was worked out at a meeting in Colombo in July, and it became the subject of a further meeting of the Commonwealth Consultative committee which took place in London in September and at which the government of Ceylon and other governments were represented. The report dealt in detail primarily with the problems and programmes of the Commonwealth governments in the area. For the needs of other countries it was hoped that at a later stage similar programmes would be prepared so that the whole area could be fully covered. In regard to Ceylon the report examined the government's own programme, the success of which depended primarily on adequate external finance and on the availability of technical experts, and pointed out that the current rate of investment was doing no more than maintain the present standard of living and the social services essential thereto. The view of the government confirmed the opinion that a higher level of capital investment was necessary to further progress and that failure to implement the six-year programme would mean the indefinite postponement of diversification of the economy and the expansion of food production. The Plan for Co-operative Economic Development in South and Southeast Asia appeared as a White Paper at the end of November. It contained development programmes for India, Pakistan, Ceylon, Malaya and North Borneo. (E. Hd.)

Education. Schools (1948): government and assisted 6,231, pupils 1,181,430; central and bilingual English 523, pupils 229,064. Technical college (1949-50): students 1,969. University (1949-50): students 1,850.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): tea 135·5 (135·4); rice 310 (331); cassava (1947) 203; sweet potatoes and yams (1947) 73. Fresh coconut exports (thousands, 1949): 12,897. Livestock ('000 head, Dec. 1948): cattle 1,133; buffaloes 658; sheep 55; pigs 95. Oils and fats production ('000 metric tons, oil equivalent, 1948; 1949 in brackets): 140 (135).

Industry. Fuel and power: manufactured gas ('000 cu. m., 1949; 1950, six months, in brackets) 8,040 (4,470); electricity (million kwh., 1949) 59. Raw materials (metric tons): rubber (1949, 1950, six months, in brackets) 90,921 (48,762); graphite (exports, 1949) 12,434; salt (1949) 28,775.

Foreign Trade. (Million rupees, 1949; 1950, six months, in brackets) imports 1,032 (567); exports 1,068 (642). Main sources of imports (1949): United Kingdom 18%; India 15%; Burma 15%; Australia 10%. Main destinations of exports (1949): United Kingdom 33%; United States 11%; Australia 8%; Canada 4%.

Transport and Communications. Roads (1948): 6,647 mi. Licensed motor vehicles (Dec. 1949): cars 31,261; commercial 13,230. Railways (1948): 894 mi., passengers (1948) 26·5 million; freight ('000 metric tons, 1948-49) 1,290. Air transport (1949): mi. flown 1,181,000; passenger-mi. 7,165,000; cargo net ton-mi. 47,000; mail ton-mi. 8,000. Wireless licences (Dec. 1949): 27,317.

Finance and Banking. (Million rupees) budget: (1949-50 est.) revenue 560·0, expenditure 558·0; (1950-51 est.) revenue 656·0, expenditure 654·1. Gross national debt (Sept. 1948; Sept. 1949 in brackets): 493·0 (549·1). Currency circulation (March 1949; March 1950 in brackets): 217·4 (230·4). Bank deposits (March 1949; March 1950 in brackets): 659·0 (678·7). Monetary unit: *rupee* with an exchange rate of Rs. 13·33 to the pound and Rs. 4·775 to the U.S. dollar.

See Harry Williams, *Ceylon: Pearl of the East* (London, 1950).

CHAD: *see* French Equatorial Africa.

CHAMBERS OF COMMERCE.

Devaluation of the pound sterling in Sept. 1949 brought many problems in 1950, and the government's decision that the international situation warranted a policy of rearmament added to their number. Chambers of commerce met their responsibilities as spokesmen for their members, the aggregate total of which had grown to a new high level of over 62,000.

In January a document was sent to the chancellor of the exchequer giving views of which it was hoped he would take account in framing his budget. The following topics were dealt with in this document: a call for reduced government expenditure was re-echoed; lower taxes, vital to the main national objective of better production, were only considered possible if government spending could be cut down; and, through the Association of British Chambers of Commerce, chambers pressed for an investigating committee to recommend to parliament economies over the whole range of government and local government expenditure. An easing of business taxation was sought, including the

abolition of the profits tax on profits retained for business development; and the need to leave business with adequate cash resources to modernize its equipment was stressed. Aspects of purchase tax operation were criticized. Not least, it was recommended that the national accounts should be drawn up on principles which would make them clear and informative and that they should conform to the standards laid down for trading enterprises.

In the autumn the A.B.C.C. sent to the prime minister and all other ministers a lengthy statement of its views on how the burden of rearmament could be borne by an already tightly stretched national economy, and in a democratic way; this received wide public notice and editorial approval.

The Town and Country Planning act engaged much time on the part of a special committee set up to consider its principles, its administration and its effects. In the autumn the work of this committee was expressed in a memorandum which was sent to the minister; the length and nature of the document showed that the committee had found wide scope for recommendations.

The annual meeting of the A.B.C.C. produced two days of debate devoted mainly to two broad topics: the national economic situation; and international and Commonwealth trade. Delegates' speeches ranged constructively in the wide fields opened to them and many of their recommendations were later woven into policy statements by the movement.

Chambers and the A.B.C.C. continued their efforts in the dollar exports drive and issued guidance in various ways to exporters, particularly newcomers to the North American markets. Active membership of the Dollar Exports board continued. The Anglo-Canadian Trade committee, embodying the A.B.C.C., the Federation of British Industries, the National Union of Manufacturers and the National Farmers' union, on the U.K. side, and the Canadian Chamber of Commerce, had a full week's discussions in London in the spring. Thereafter, its two sides took follow-up action in their respective countries.

With the help of some of its leading constituents, the A.B.C.C. continued to advise the Board of Trade on specific cases of frustrated exports; applications to release such exports in the home market were markedly fewer than in the previous year. There were frequent discussions with the Board of Trade in advance of bilateral trade negotiations with foreign countries, and the A.B.C.C. took part in the work of the Consultative Committee for Industry which debated such matters as the liberalization of intra-European trade, the E.R.P. and the international tariff negotiations which opened in Torquay in September.

Transport matters received considerable attention, including such important subjects as a policy statement by the British Transport commission on the integration of transport services and a draft outline of principles to be embodied in a charges scheme. Certain chambers were intimately involved in discussions with the Docks and Inland Waterways executive in the work of reviewing trade harbours delegated to it by the B.T.C. (A. R. K.)

International. In 1950 the International Chamber of Commerce welcomed two important developments for which it had long worked, namely: (a) the British government's decision to give unilateral relief from double taxation, which the chamber had for many years pressed on governments of all parties, as a temporary relief until the full system of double taxation treaties could be achieved; and (b) the European Payments union, a project which the chamber had strongly supported, as a valuable stage towards world-wide interconvertibility of currencies.

The chamber also contributed to important developments in two other fields. At the request of the United Nations Transport and Communications commission and of the Economic Commission for Europe it drew up recommendations on the basic principles which, in the interest of users, should govern any national or international system of co-ordination of different modes of transport. Similarly, the chamber's reports on the removal of barriers to the international transport of goods were used as basic documents by the U.N. Economic and Social council and by the British government's working party on this subject.

The chamber published recommendations on (i) the Schuman plan, as one item in the general progress towards the economic co-ordination of European industry; (ii) the improvement of distribution censuses; (iii) the lessening of flag discrimination in sea transport and port delays, both of which materially increased the prices of goods to the ultimate consumer; (iv) the organization by businessmen of schemes designed to handle or avoid both burdensome surpluses of primary commodities, such as those which disorganized world economy in the 1930s, and shortages of such commodities, without excessive price increases, such as those which took place in the later months of 1950 owing to rearmament and stockpiling; and (v) the " pros and cons " of guarantees by the governments of capital-exporting countries, as a means of encouraging foreign investments in underdeveloped countries.

The following printed reports were published during the year: *Financing Economic Development; Means for Promoting the Grant of Patents Licences in the International Plane; Code of Standards of Advertising Practice; Speeding up Air Transport.* (C. G. FE.)

CHANNEL ISLANDS. A group of islands in the English channel, of which the largest are Jersey, Guernsey, Alderney and Sark, forming part of the United Kingdom, but administered independently. Area: 75 sq.mi. Pop. (1949 est.): 103,800. Capitals: Guernsey, St. Peter Port; Jersey, St. Helier. Lieutenant governor of Jersey, Lieut. General Sir Arthur Grasett; lieutenant governor of Guernsey, Lieut. General Sir Philip Neame.



Breton dancers in their national dress at St. Helier, Jersey, during the Jersey-French week, July, 1950.

History. The islands were again troubled with Colorado beetles in the early summer, when large numbers were blown on to the islands from France; about £20,000 was spent to protect the potato crop. The Jersey States in April rejected the tomato export regulations and thus virtually eliminated the Jersey Tomato panel, a States-controlled company which exported the tomato crop. The agricultural committee

immediately resigned. The States decided to seek advice from the Home Office in London on the re-organization of the island's police force after receiving two critical reports on the police from British experts.

For the first time for 20 years a resident of Guernsey raised the *clameur de haro*, the ancient custom of "crying for justice." In January it was decided to introduce, with the voluntary help of fishermen, a scheme for the propogation of lobsters in artificial hatcheries. A speed limit of 35 m.p.h. on all roads was introduced in August in an effort to reduce the number of accidents. The first divorce cases in Jersey were heard in April, after the passing of a divorce bill. Both Jersey and Guernsey accepted proposals for two years compulsory military service, bringing them into line with Great Britain.

In Sark elections were held on Oct. 3 for the Court of Chief Pleas. This was the first general election on the island for 28 years: there were 326 voters on the roll and 25 candidates for 12 seats. In 1949 it was discovered that since 1925 the island had been ruled by an illegal parliament because amendments to the constitution had not been submitted to the King, and in 1950 the Sark Elections Validation law was approved by the King. During the summer the Chief Pleas ordered an Irish terrier bitch to be destroyed in accordance with an Elizabethan law which reserved to the Seigneur of Sark the right to keep bitches.

BIBLIOGRAPHY. G. R. Balleine, *A History of the Island of Jersey* (London, 1950); S. Bisson, *Jersey, Our Island* (London 1950); A. J. Eagleston, *The Channel Islands under Tudor Government, 1485-1642* (Cambridge, 1949); R. M. Lockley, *The Charm of the Channel Islands* (London, 1950); R. C. F. Maugham, *The Island of Jersey To-day* (London, 1950).

CHAVES, FEDERICO, Paraguayan statesman (b. Asunción, 1882). After receiving in 1905 his degree of doctor of laws at the National university, Asunción, he practised in that city. He entered politics by joining the National Republican (Colorado) party. When in Aug. 1946 his party joined for the first time a coalition government, Chaves was a judge in the Supreme Court and a member of the executive committee of the Colorados. In Jan. 1947 he was appointed minister of foreign relations. In Nov. 1947 the party split over the candidatures to the presidency, only the conservative wing nominating Chaves. From May 14, 1949, he was again minister of foreign relations. On Sept. 11, 1949, he was unanimously elected provisional president by the congress. On July 15, 1950, he was elected president for a three-year term.

CHEMISTRY. Fluorine. The very high reactivity of this element and the consequent difficulty of handling it led to its neglect for many years. During the period 1940-50 the chemistry and technology of fluorine and its compounds made spectacular advances which were reviewed by H. R. Leech in *Quart. Rev. Chem. Soc.*, London, 1949, and A. G. Sharpe, *ibid.*, 1950. The industrial importance of these developments lay in the production of compounds of carbon and fluorine, the fluorocarbons, analogous to the hydrocarbons. These could provide solvents, lubricants and synthetic resins far more chemically inert than any other organic compounds. One of the most interesting discoveries in fluorine chemistry was made during 1950 by H. J. Emeléus and his school, who found a new series of compounds analogous to acids. Just as conventional acids are characterized by the H_3O^+ ion which arises from the self-ionization of water ($2H_2O \rightleftharpoons H_3O^+ + OH^-$), these compounds have the difluorobromonium ion, BrF_2^+, in common, which arises from the self-ionization of the very reactive liquid BrF_3: $2BrF_3 \rightleftharpoons BrF_2^+ + BrF_4^-$. Examples of these new compounds are $BrF_2^+SbF_6^-$, $(BrF_2)_2^+ {}^+SnF_6^{--}$, $BrF_2^+ AuF_4^-$. By reaction with the corresponding base-analogues they form the corresponding salts and ampholyte, just as conventional acids and bases form salts and water; *e.g.*,

$$BrF_2^+SbF_6^- + Ag^+BrF_4^- \rightarrow \underset{\text{salt}}{AgSbF_6} + \underset{\text{ampholyte}}{2BrF_3}$$

Komplexones. The greatest advance in inorganic analysis in latter years was made by G. Schwarzenbach (see *Helvetica Chimica Acta*, Basle, 1949), who with his collaborators developed the use of Komplexones. These are substances of the type of ethylenediamine tetra-acetic acid (I) which form strong complexes with polyvalent metal ions. The determination of almost all polyvalent metal ions could now be carried out volumetrically with high precision, thus making the older, very tedious gravimetric methods largely redundant. The Komplexones could be used in three distinct ways. (1) The addition of a solution of a Komplexone such as (I) to the metal solution liberated an amount of acid equivalent to the metal content of the solution; the acid was then titrated with alkali using conventional acid-base indicators. (2) In the presence of iodide-iodate the acid liberated as in (1) formed an equivalent quantity of I_2 which was estimated by thiosulphate. (3) The buffered metal solution was titrated with a solution of the di-sodium salt of (I) in the presence of a metal indicator (*e.g.*, Murexide) which changed colour when the last traces of free metal ions had been removed from solution by complex formation. One of the most important uses of these new methods was in the large scale determination of water hardness.

Polyelectrolytes. A. Katchalsky *et al.* (see *J. Polymer Science*, 1950) elaborated in detail the theory of the behaviour of polymeric electrolytes, using polyacrylic acid as a model This acid is soluble in water. Since it is a weak acid it is only dissociated to a very slight extent so that there is no electrostatic repulsion between neighbouring carboxyl groups and therefore the dissolved molecule is randomly coiled. As alkali is added to such a solution an increasing proportion of the carboxyl groups dissociates and the resulting electrostatic repulsion between the $—COO^-$ groups leads to an extension of the chain. This is shown up by a sharp increase in the intrinsic viscosity and the streaming bi-refringence of the solutions. The relationship deduced theoretically for the dependence of the intrinsic viscosity on the degree of neutralization was in good agreement with experiment. It was hoped that these investigations would eventually help in the interpretation of the properties of naturally occurring polyelectrolytes such as pectin, alginic acid and the proteins. In particular, analogous processes were believed to be involved in the mechanism of muscular contraction.

Bond Dissociation Energies. The energy involved in the bonds between linked atoms is of fundamental importance for the quantitative understanding of reaction rates and chemical equilibria. There had been much confusion as to the exact definition of this quantity, but M. Szwarc and M. G. Evans (see *J. Chem. Phys.*, New York, 1950) examined and clarified the position. The dissociation energy D(A-B) of a bond A-B in the molecule or radical M is defined as the energy required to disrupt M by breaking the bond A-B only into fragments R_1 and R_2 which may be atoms, radicals, or molecules. In order to define D(A-B) completely it is necessary to specify the electronic state of M and R_1 and R_2 and to compute D(A-B) for M, R_1 and R_2 in the gas phase at zero pressure and 0^0K. The bond dissociation energy thus defined is a definite and measurable quantity. It is not, as was originally thought, a property only of the two atoms concerned, but is profoundly influenced by the remainder of the molecule of which they form a part. For instance, the dissociation energy of the carbon-iodine bond has the following values in the compounds listed:

	CH_3I	C_2H_5I	$(CH_3)_3CI$	$C_6H_5CH_2I$	
D(C-I)	54	51	45	39	Kilocalories/mole

Szwarc and Evans also indicated how the rather vague concept of "average bond energy," q, which was used by some chemists could be defined rigorously, though arbitrarily, and they showed that since it was not an observable, it was not a very useful concept. They defined q in such a way that the sum of all the q's in any molecule was equal to the heat of atomization of that molecule. The methods used to determine bond dissociation energies and their theoretical background were reviewed by Szwarc (see *Chem. Rev.*, Baltimore, 1950), who also gave a comprehensive list of bond dissociation energies and related quantities.

Flash-photolysis. The maximum light intensity (including sunlight) available for photochemical research had been relatively small (not more than about 10^{20} quanta/sec.) Then R. G. W. Norrish and G. Porter (see *Nature*, London, 1949, and *Proc. Royal Soc.*, London, 1950) showed how a one-metre quartz discharge tube with tungsten electrodes, filled with rare gas which could give flashes of about 10^{24} quanta/sec. lasting a few milliseconds, could be used in photochemistry. The energies of these discharges were of the order of a few thousand Joule/flash. Alongside the discharge tube was mounted the reaction vessel, a tube of similar length and about 500 cc. capacity, which contained the gas or gases the reactions of which were to be studied under the intense illumination. The flash caused the disruption of a very high proportion of the molecules in the reaction vessel so that during and immediately after discharge the concentration of atoms and free radicals was far higher than any obtainable by other means and was comparable to that of the undissociated molecules. Consequently the extent and course of the ensuing reactions differed markedly from those of conventional photochemical decompositions. Furthermore, this technique provided a method for obtaining the absorption spectra of short-lived free radicals. Immediately after the main flash had illuminated the reaction vessel, a second smaller flash of light was sent down the length of the reaction vessel and into a spectrograph, where the absorption spectrum of the contents of the reactions vessel was recorded. By this method new and otherwise inaccessible fundamental information about the structure of free radicals was obtained.

Cationic Polymerization. The reactions of hydrocarbons induced by metal halides (*e.g.*: BF_3; $TiCl_4$; $AlBr_3$), such as alkylation or polymerization, were long thought to be due to the metal halides themselves. Then it was shown by M. Polanyi and collaborators (see *J. Chem. Soc.*, London, 1947) that isobutene was not polymerized by $TiCl_4$ unless some third component, called the co-catalyst, was present. The most usual co-catalyst was water, but alcohols, carboxylic acids, alkyl halides and other compounds could also act thus. A similar phenomenon was found in the alkylation and isomerization of paraffins with $AlBr_3$ by V. N. Ipatieff, H. Pines and collaborators (see *J. Am. Chem. Soc.*, New York, 1945-50). The polymerization of isobutene by BF_3 at −80°C. appeared to be an exception since rigorous purification of reagents failed to stop it. Finally, however, A. G. Evans and G. W. Meadows (see *Trans. Faraday Soc.*, London, 1950) succeeded by an ingenious technique in obtaining the reagents so dry that they would not react when condensed together. The admission of minute traces of water to the non-reactive mixture of BF_3 and isobutene caused instantaneous polymerization. It now appeared that metal halides in general did not cause hydrocarbons to react unless a third substance provided the possibility of forming an ion pair, the positive half of which was a carbonium ion by which the reaction was propagated. A new theory to account for the different behaviours as polymerization catalysts of aluminium halides on the one hand, and boron, tin and titanium halides on the other, was proposed by P. H. Plesch (*see* Plastics and Polymer Symposium, *Chemistry and Industry*, London, 1950).

New Aryl Urea Polymers. Th. Lieser and G. Nischk, (see *Liebig's Annalen der Chemie*, 1950) described a new family of linear polymers consisting of aromatic substituted ureas. These were made by reacting aromatic di-isocyanates with aromatic diamines; *e.g.*, from pp′ diphenyl di-isocyanate and benzidine a polymer of the following structure was obtained:

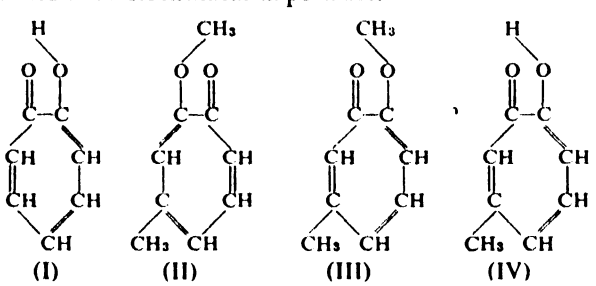
$$[-C_6H_4 \cdot C_6H_4 \cdot NH \cdot CO \cdot NH \cdot C_6H_4 \cdot C_6H_4 \cdot NH \cdot CO \cdot NH-]_n$$

These polymers were insoluble in all the usual organic solvents. The same authors also described the preparation of intrinsically coloured polymers by the reaction of di-isocyanates with dyestuffs containing two phenolic or aromatic amine groups. Since the polymeric dyestuffs thus formed were insoluble in all usual solvents they were prepared inside the fibres to be dyed by immersing them successively in a solution of the di-isocyanate and then in one of the dyestuff. The molecules of the polymeric dyestuff being too large to escape from the spaces within the fibres in which they were formed, the dyes were extremely fast.

Clathrates (Enclosure Combinations). Molecular compounds formed from two different molecules in definite proportions and held together more or less firmly by secondary valency forces had been known for many years. During 1947-50 two groups of workers published their independent discoveries of a new type of molecular combination in which the molecules of one component (A) were physically imprisoned within the cavities of an open crystal lattice formed by the other component (B), without there being any form of chemical bonding between A and B. This type of combination was termed "clathrate" by H. M. Powell (see *J. Chem. Soc.*, London, 1948). Since there is an upper limit to the ratio of A:B in the clathrate, given by the number of cavities in the crystal lattice of B, but no lower limit, because all the cavities need not be filled by A, the clathrates are not strictly chemical compounds but should rather be called combinations. Powell and his collaborators (*ibid.*, 1947-50) studied especially the clathrates based on quinol and were able to prepare combinations of this with SO_2, CO_2, HCOOH, CH_3OH, A, Kr and Xe. Each of these was too large to escape from the cavities formed by the interpenetrating hydrogen-bonded quinol lattices, in which they were caged when quinol was allowed to crystallize slowly in their presence. The clathrates showed no dissociation pressure, but were destroyed when the caging compound, in this case quinol, was melted or dissolved. Powell and J. H. Rayner (see *Nature*, London, 1949, and *J. Chem. Soc.*, London, 1950) prepared a clathrate of benzene and an ammonia-nickel cyanide complex. The cage-size of the $Ni(CN)_2 \cdot NH_3$ lattice could accommodate benzene (and thiophene) but not their homologues; *e.g.*, toluene. By means of clathrate formation very pure benzene could be produced. Another type of clathrate based on urea as the cage compound was discovered in 1940 by F. Bengen and was described by him and W. Schlenk, jr. (see *Experientia*, Basle, 1949, and *Liebig's Annalen der Chemie*, 1949); a detailed investigation was published by W. J. Zimmerschied *et al.* (see *Industrial and Engineering Chemistry*, Washington, 1950). If urea was crystallized in the presence of unbranched hydrocarbons, alcohols, esters, aldehydes, ketones, amines or halides, containing more than six carbon atoms in the hydrocarbon chain, clathrates of urea and the other component were formed in which these were enclosed in "tunnels" formed by the open hydrogen-bonded urea lattice. However, this was not stable in the absence of the long-chain compound and so differed from the quinol lattice. A small degree of branching, *e.g.* one CH_3 group at the end of a

chain, did not prevent clathrate formation, but branching near the middle of the chain did; and thus clathrate formation provided an easy method of separating mixed long-chain hydrocarbons (or other compounds) into straight-chain and branched-chain fractions. The potential importance of this in petroleum technology was considerable.

Tropolones. The strange properties of the mould metabolites stipitatic and puberulic acids led M. J. S. Dewar (see *Nature*, London, 1945) to propose that they were derivatives of a hitherto unknown ring system which he named tropolone (I) and he suggested that the plant hormone colchicine was derived from the same parent compound. Four years later this inspired guess was confirmed when almost simultaneously three groups of workers reported syntheses and degradations leading to tropolone or its derivatives. J. W. Cook *et al.* (see *Chemistry and Industry*, London, 1950) synthesized (I) by brominating cyclo-heptane-1.2-dione directly and debrominating the reaction product by catalytic hydrogenation to (I). R. D. Haworth and J. D. Hobson (*ibid*, 1950) prepared (I) from purpurogallin via β-methyl tropolone, and W. von E. Doering and L. H. Knox (see *J. Am. Chem. Soc.*, New York, 1950) obtained (I) by oxidation of a reaction product of benzene and diazomethane. The strongly acidic nature of (I) and the absence of ketonic characteristics are understandable in terms of the high degree of resonance present in this compound. This also accounts for its strong aromatic character exemplified by the fact that it undergoes substitution rather than addition. It gives stable metal salts, highly coloured due to the strong resonance of the ion, forms highly coloured complexes with $FeCl_3$ and appears to have marked antibiotic properties. There are two isomeric methyl esters (II) and (III) of β-methyl tropolone (IV), which, together with spectroscopic evidence, indicates that (IV) is a tautomeric mixture. Derivatives of tropolone seemed to be widely distributed in nature, and the further investigation of this system promised to yield results of biochemical importance.



Carotenes. These highly unsaturated hydrocarbons containing 40 carbon atoms are widely distributed among plant and animal pigments and are of great biochemical importance, especially through their relationship to vitamin A. Advances in carotene chemistry enabled O. Isler and collaborators to work out a commercial synthesis of vitamin A which reduced its price by 75%. The first complete synthesis of β-carotene was achieved by H. H. Inhoffen *et al.* (see *Chemiker Zeitung*, 1950) by two different methods, and shortly afterwards P. Karrer and C. H. Eugster (see *Helvetica Chimica Acta*, Basle, 1950) synthesized both α- and β-carotene, though in low yield.

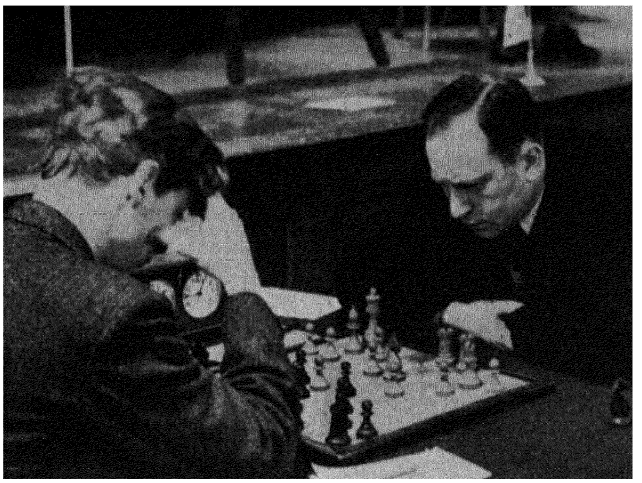
Cortisone. (E. C. Kendall's Compound E; 17-hydroxy-11-dehydrocorticosterone). The dramatic therapeutic effects which this compound exerts on arthritic patients focused attention on its synthesis, especially since in animals it only occurs in minute quantities: not more than 0·5 gram can be obtained from 1,000 lb. of beef adrenal glands. L. H. Sarett achieved two syntheses of Cortisone (*see* L. F. Fieser and M. Fieser, " Natural Products related to Phenanthrene," *Am. Chem. Soc. monograph no. 70*, New York, 1949) which had been characterized by several workers before 1940. Unfortunately the preparation of Cortisone from commercially available materials required a very large number of steps. Nevertheless, it was being prepared on the kilogram scale in 1950, and the synthetic methods were being improved and simplified.

Lithium Aluminium Hydride as a Reducing Agent. One of the most vexing problems in organic chemistry was that of reducing carboxylic acids RCOOH to alcohols RCH_2OH. This was solved by the use of lithium aluminium hydride, $LiAlH_4$, a stable, ether-soluble compound discovered by A. E. Finholt, A. C. Bond and H. I. Schlesinger (see *J. Am. Chem. Soc.*, New York, 1947). Its powerful reducing properties were subsequently intensively investigated, mainly in the U.S.A. (see *Annual Reports, Chem. Soc.*, London, 1949). The hydrides of zinc and beryllium were prepared for the first time by means of this reagent and it could also be used for the preparation of the hydrides and alkylated hydrides of silicon and tin. The most important uses of $LiAlH_4$ are in the reduction of organic compounds: acids, esters, anhydrides, carbonyl compounds, acid chlorides, epoxides and lactones are reduced to alcohols, amides and nitriles to amines, and halides are reduced with elimination of the halogen atom. Most types of double bond are unaffected, especially if the reaction is carried out at room temperature or below. The yield from all these reductions was usually greater than 70%. Analytically, the method could be adapted to provide an alternative to the Zerewitinoff method for the determination of active hydrogen. The importance of this tool in the investigation of the large and often delicate molecules met in researches on natural products cannot be overestimated. (*See* also ATOMIC ENERGY; BIOCHEMISTRY.) (P. H. P.)

CHERVENKOV, VLKO, Bulgarian politician (b. Zlatitsa, Bulgaria, Sept. 6, 1900), the son of a peasant, was educated at a Sofia *gymnasium* and later worked as an army clerk. He joined the Bulgarian Workers' (Communist) party in 1919 and was a member of the central committee of the Communist Youth league, 1920-25. In Sept. 1923 he took part in an unsuccessful Communist uprising. He was editor of the legal crypto-Communist newspaper *Budashte* (Future) and the underground *Voinishki Glas* (" Soldier's Voice "). In Oct. 1925 he went to Moscow where he studied at the Marx-Lenin school of which he eventually became director. In 1941 he was appointed director of the " Hristo Botev " radio station broadcasting to Bulgaria by Gheorghi Dimitrov, his brother-in-law. He returned to his country in Sept. 1944, becoming a member of the central committee of the Bulgarian Communist party and first secretary of its Politburo, and in Sept. 1947 was a Bulgarian delegate at the conference at Wilcza Góra, Poland, at which the Cominform was created. On Dec. 12, 1947, he was appointed minister of culture and on July 20, 1949, first deputy prime minister. On the death of Vasil Kolarov (*see* OBITUARIES) on Jan. 23, 1950, Chervenkov succeeded him as prime minister.

CHESS. The annual congress at Hastings, Sussex, resulted in a victory for L. Szabó (Hungary); N. Rossolimo (France), who won in 1949, was second. S. G. Tartakower (France) and A. Bisguier (U.S.) tied for first place in the international tournament at Southsea, Hampshire; V. Bogoljubow, the German champion, finished sixth.

In the British championships, held at Buxton, Derbyshire, R. J. Broadbent won the title for the second time; E. Klein was second and P. S. Milner-Barry and J. Penrose were equal third. Mrs. R. M. Bruce and Miss M. Henniker-Heaton tied for first place in the ladies' event. Malcolm Barker retained his British boys' title at Hastings, Jean Croker her girls'



L. Szabó, Hungary, (right) playing against J. A. Fuller, Great Britain, in the Hastings tournament, Jan. 1950.

title in London; Barker was the only player in the boys' tournament to be unbeaten. O. Penrose (Cambridge) won the first British universities' championship. The annual university match was won by Cambridge. The counties' championship was won by Middlesex.

The women's world championship, played in Moscow, was won by Lyudmila Rudenko (U.S.S.R.). The next three places were also taken by Russian players, O. Rubtsova, V. Belova and E. Bykova; Eileen Tranmer (Great Britain) was equal fifth. A tournament was held at Budapest to find a challenger to M. Botwinnik for the world championship. D. Bronstein and I. Boleslavsky (both of U.S.S.R.) tied for first place with 6 points each. In two further matches Bronstein won by 7½ points to 6½, which gave him the right to play Botwinnik in 1951. V. Smyslov and P. Keres were third and fourth. In the women's championship also the first four places were taken by the U.S.S.R.

The International Chess federation held the first postwar Olympiad at Dubrovnik, Yugoslavia. The U.S.S.R. was not represented, and British players did not take part as the tournament clashed with the British events at Buxton. Yugoslavia was first with 45½ points, followed by Argentina, Western Germany and the United States.

The tournament at Beverwijk, Netherlands, was won by J. H. Donner, a Dutch student. Other 1950 results were: Bucharest, L. Pachman (Czechoslovakia); Mar del Plata, S. Gligorić (Yugoslavia); Venice, A. Kotov (U.S.S.R.); Wrocław, P. Keres (U.S.S.R.); Belgrade, S. Nedeljković (Yugoslavia); and Amsterdam, M. Najdorf (Argentina). The German championship was won by W. Unzicker, and P. Keres won the Soviet championship.

CHIANG KAI-SHEK, Chinese army officer and statesman (b. Fenghwa, Chekiang, Oct. 31, 1887), came from a humble family. In 1905 he went to Tokyo where he met Sun Yat-sen and came immediately under his influence. In 1907 he was accepted at the Preparatory Military academy in Tokyo and after graduating in 1909 served in a Japanese artillery regiment. He left secretly for China in 1911 at the start of the revolution (For his career see *Encyclopædia Britannica*). Chiang was president of China from 1928 to 1931 and was re-elected in Sept. 1943. In Dec. 1943 he met President Roosevelt and Winston Churchill at the Cairo conference, where the principle of Chinese territorial integrity was recognized. At Yalta, however, the U.S.S.R. had not only been promised the old transit rights in Manchuria but was also conceded the final separation of Outer Mongolia from China. And, as the U.S.S.R. supported the Communist government of Mao Tse-tung (*q.v.*) Chiang felt the eight years' war of China had resulted in placing the U.S.S.R. in the position formerly occupied by Japan. Having returned with his government to Nanking by May 1946, he ordered the election of a national assembly. On Dec. 25, 1946, the assembly adopted a new constitution providing for a parliamentary form of government. Chiang was re-elected president. He retired from the presidency on Jan. 21, 1949, to end the civil war, but continued to exert authority in the Nationalist government and to direct the fight against the Communists. He resumed the office of president of the national government in Formosa on March 1, 1950, when Acting President Li Tsung-jen still remained in the United States. On March 12 Chiang's cabinet was reorganized without Li's faction and on March 16 he took direct control of the Nationalist forces defending Formosa. When war broke out in Korea Chiang offered 33,000 men to the United Nations. The U.S. State Department did not accept the offer. After General Douglas MacArthur's visit to Formosa on July 31, however, Chiang stated on Aug. 2 that General MacArthur and he had reached agreement on the problems they had discussed and that the foundation for Sino-American military co-operation and a joint defence of Formosa had been laid. After Chinese Communist forces openly entered into the Korean conflict, Chiang, on Nov. 13, urged the Chinese troops in Korea to surrender to the United Nations and the Chinese people on the mainland not to fight for what he termed the Soviet cause in Korea.

CHILD LABOUR: *see* YOUTH EMPLOYMENT.

CHILDREN'S BOOKS. An outstanding event was the publication of *Four to Fourteen*, a selective, annotated catalogue of some 1,200 children's books, compiled by Kathleen M. Lines for the National Book league. Contemporary writing for children was surveyed in an article in *The Times Literary Supplement* (Aug. 25), which periodical continued to publish sections containing children's book reviews (June 16 and Nov. 17). The Library association Carnegie medal was awarded to Agnes Allen for *The Story of your Home*. Kenneth Grahame's *The Wind in the Willows* was reprinted with striking illustrations by Arthur Rackham.

Welcome additions to the small number of suitable titles for young adolescents were *The Years of Grace*, edited by Noel Streatfeild, covering the problems and interests of girls; *The Lark on the Wing*, a sensitive study of a girl singer, by Elfrida Vipont; and *A Dream of Sadler's Wells*, a story of ballet by Lorna Hill. Biographical works included *Elizabeth Fry*, written with fine perception by Kitty Barne; a straightforward account of *Florence Nightingale* by Lucy Seymer; a discerning portrait of *Hudson of Hudson's Bay* by the explorer J. M. Scott; and *Marco Polo*, written in adult style by Maurice Collis. *Going to the Ballet* by Arnold Haskell and *Going to a Concert* by Arthur Salter were expertly written introductions.

Interesting contributions to factual literature included *The Story of the Highway* by Agnes Allen and *The Musical Detectives* by Irene Gass and R. J. McGregor, both written within a fictional framework; *The Book of Flags* by Gordon Campbell and I. O. Evans, with excellent illustrations; and *John and Mary's Aunt*, personal recollections of a girlhood in Japan, told with charming simplicity by Grace James. Practical advice on popular hobbies was given in the *Junior Teach Yourself* series.

Poetry was represented by *The Wandering Moon* by James Reeves and, in freer style, Ian Serraillier's *The Tale of the Monster Horse*. Adventures from the Odyssey were retold by Aubrey de Sélincourt in *Odysseus the Wanderer*.

Foremost among several historical stories with good



A drawing by C. Walter Hodges from "The Queen Elizabeth Story" by Rosemary Sutcliff (O.U.P., 1950).

characterization and feeling for locality as well as period was *The Secret Fortress*, by Joyce Reason, a vigorous tale of the Northmen during the reign of William I. Adventures at the time of Trafalgar were skilfully narrated by John Keir Cross in *Blackadder;* Kathleen Fidler chose an unusual theme in *I Rode with the Covenanters* and Philip Woodruff took liberties with history in *Hernshaw Castle*. In gentler vein were *The Queen Elizabeth Story* and *The Chronicles of Robin Hood* by Rosemary Sutcliff and *The Five Wishes*, a Victorian chronicle by Dorothy Stuart.

Outstanding adventure stories of traditional pattern were *The City of Frozen Fire* by Vaughan Wilkins and *Cocos Gold* by Ralph Hammond, with *There is no Escape* by Ian Serraillier and *Saturday Adventure* by John Pudney, in modern idiom. Psychology was predominant in Richard Church's *The Cave*, science in Donald Suddaby's *The Star Raiders* and the sea in Andrian Seligman's *Thunder Reef. The Islanders* was a satisfying tale of open air life by Roland Pertwee. Africa was sympathetically depicted in *African Boy* by Grace Huxtable and *Salifu the Detective* by C. J. Neville; Australia in *Bush Voyage* by Stephen Fennimore; Czarist Russia in *A Boy in Samarkand* by George Sava; an American lumber town in *North Fork* by Doris Gates; and English and Italian scenes in *Giovanna and Jane*, by Iris Origo.

Among fantastical tales were *The Big House* by Naomi Mitchison and *The Lion, The Witch and the Wardrobe* by C. S. Lewis, both of unusual depth and imagination; *Finn Family Moomintroll*, by Tove Jansson, translated from the Swedish; and *The Wonderful Stranger*, by Roger Lancelyn Green. There was delicate charm in *"Don't go out of sight, Miranda"* by Elizabeth Gorell and *The Cats and Rosemary*, by Frank Swinnerton; homely fairy stories in *The Seventh Pig* by Patricia Lynch and *The Cobbler's Shop* by Alison Uttley; originality in *Galloping Fred* by Antonia Ridge; humour and invention in *The Adventures of Chunky*, by Leila Berg; and solemn absurdity from America in *The Twenty-one Balloons* by William Pène du Bois.

The White Riders by Monica Edwards, *The House in Hiding* by Elinor Lyon, *Under Black Banner* by Geoffrey Trease and *Roly's Dogs* by Kitty Barne were pleasantly readable tales with good local colour. There was sparkling fun and pathos in *Lottie and Lisa* by Erich Kästner and imaginative use of colour in *A Bell for Ursli* by Selina Chönz, both translated from the German. *Sandy the Red Deer*, a nature story by F. Fraser Darling, was notable for its good prose style. (D. D. C.)

United States. Colour was used lavishly in such picture books as Ingri and Edgar D'Aulaire's *Benjamin Franklin* and Leo Politi's *A Boat for Peppe*. Animals were the subject for Clare Newberry's *T-Bone the Baby-Sitter* (cats) and *Blaze Finds the Trail* (horses) by C. W. Anderson, and imagination ran rampant in *If I Ran the Zoo* by Dr. Seuss (T. S. Geisel). Linoleum cuts illustrated *Dick Whittington and His Cat* by Marcia Brown, and *The Two Reds* by W. Lipkind and N. Mordvinoff was unusual and distinctive.

The selection of stories to read aloud to the six-to-eight-year-olds ranged from the loss of a tooth in *Excitement in Appleby Street* by R. and E. Crist to a jungle tale in *Picken's Great Adventure* by Norman Davis.

Indians and being lost in the woods was the plot of *First Adventure*, a tale of the Pilgrims by Elizabeth Coatsworth. Stories laid in other lands were *A Cap for Mul Chand* (India) by Julie Batchelor, *Magic Money* (Costa Rica) by Ann N. Clark and *The Storks of Lillegaard* (Denmark) by Wilhelmine Frisch. The real American boy was portrayed in *Martin Butterfield* by John Burgan and in *Windfall Fiddle* by Carl Carmer. Stories by favourite authors were *Born to Trot* by Marguerite Henry and *Texas Tomboy* by Lois Lenski. The amazing existence in a circus was described in *Hidden Trapezes* by Edward Fenton.

Older boys enjoyed the history and adventure in *Make Way for the Brave* by Merritt P. Allen, *Whaler 'Round the Horn* by Stephen W. Meader and *The Secret Fiord* by Geoffrey Trease. The trials of adolescent girls were pictured in the sensitively written *Margaret* by Janette S. Lowrey, in *Hoofbeats on the Trail* by Vivian Breck and in *To Tell Your Love* by Mary Stolz.

Biographies were represented by *Sir Walter Raleigh* by Nina B. Baker, *Gandhi, Fighter Without a Sword* by Jeanette Eaton, *Abraham Lincoln: Friend of the People* by Clara I. Judson and Mabel L. Hunt's *Better Known as Johnny Appleseed.*

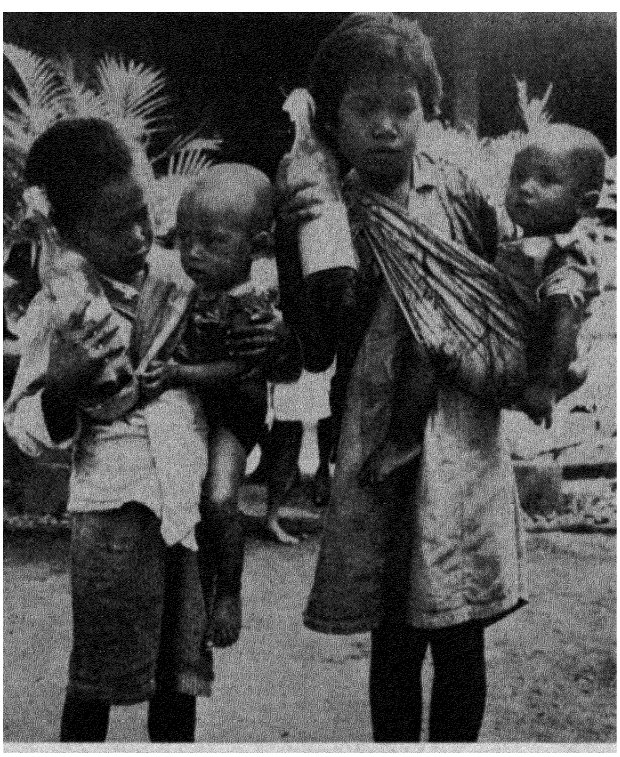
Everyday Machines and How They Work by Herman Schneider and *First Book of Stones* by Maribelle Cormack met special needs. The arts were represented by Amy Hogeboom's *Boats and How to Draw Them; This is an Orchestra* by Elsa Z. Posell and *Pictures of France by Her Children* by Marion Cothren. Folklore was enriched by *John Henry and his Hammer* by H. Felton and by *Jack O'Moora and the King of Ireland's Son* by Bryan MacMahon. Far Eastern legends and folk tales were represented by Chang Fa-Shun's *The Sky River* (Chinese).

Books to share with the family were Ruth Seeger's *Animal Folk Songs for Children* and the nostalgic *Second St. Nicholas Anthology* of Henry S. Commager. The need for fresh Christmas stories was met by Louise Fatio in *The Christmas Forest* (ages 4-8), by Tasha Tudor in *The Doll's Christmas* (ages 5-8) and by the artistically illustrated *Lucy's Christmas* of Anne Molloy (grades 4-6). (E. G.)

CHILD WELFARE. The Adoption of Children act of 1949, which came into force on Jan. 1, 1950, amended some fundamental aspects of the law of adoption in England and Wales. As from April 1, 1950, every adoption, however arranged, is subject to a three-month probationary period. Prospective adopters who make arrangements through an adoption society need no longer wait three months before making application to a court; and no person who has given consent to adoption (attested by a justice of the peace when the infant was at least six weeks old) shall be entitled to remove the child from the prospective adopters without the leave of the court. The new act makes it possible for prospective adopters to conceal their identity from the natural parents. The natural father may now adopt without any limitation concerning age; and any relative (including the kin of the natural father) who is at least 20 years old may adopt an infant. The adopted child is now regarded as the child of the adopters and not of the natural parents for inheritance as well as for other purposes and remains within the prohibited degrees of consanguinity even if subsequently adopted by someone else. Provided the child is resident in England and Wales an adoption may be effected whether the child is a British subject or not. The above is a broad outline of the main alterations in the law, not an exhaustive statement of the law as it now stands.

In Aug. 1950 the report of the Home Office committee on employment of children as actors in films, in theatrical work and in ballets was published. It recommended further safeguards in relation to children of school age with a reference to their licensing, education, general supervision, hours of work, payment, etc.

The Home Office, the Ministry of Health and the Ministry of Education issued on July 31, 1950, a joint circular on children neglected or ill-treated in their own homes. Based on the findings of a working party of officials from the departments and the corresponding Scottish departments, it outlined the powers of local authorities in relation to assistance to be given to families and urged that the most effective use should be made of existing resources: an officer was to be responsible to the local authority for enlisting the interest of those concerned and for making arrangements to secure full co-operation from all the local services concerned with the welfare of children in their own homes. It was not stated whether this officer should be the children officer, but in practice this might prove to be the case.



Indonesian children with bottles of milk leaving a distribution centre of the U.N. International Children's Emergency fund in Jokjakarta.

The secretary general of the United Nations in his report on child welfare presented during 1950 stated that of the 600 million children under the age of 15 in the underdeveloped areas of the world, 80% were suffering from undernourishment, malnutrition and lack of medical or educational facilities: in a large part of Asia 50% of the children died before they reached the age of 15. Amongst many activities for child welfare, the United Nations was undertaking a world study of the question and trying to set international standards; it also gave technical advice and assistance to governments that could not fully meet the needs of their children. In the years 1947-49 over 400 technicians from 34 countries, including social administrators, probation officers, directors of schools for social workers, heads of social institutions and occupational therapists, had been awarded United Nations fellowships in social work.

The United Nations International Children's Emergency fund, which had raised $148 million by voluntary contributions from governments and private sources, at first concentrated on supplementary feeding and clothing programmes and disaster relief. More recent activities included campaigns against tuberculosis, venereal diseases and malaria and on behalf of socially, mentally and physically handicapped children. About 22 million children throughout the world were examined in a mass attack on tuberculosis supported by U.N.I.C.E.F. and the Scandinavian relief societies. This was the greatest preventive medical campaign ever undertaken in the world's history.

With the economic improvement in Europe, long-range programmes for child welfare were being expanded by individual governments with U.N.I.C.E.F. assistance. An instance of this was the milk-conservation programme, whereby milk-handling equipment and pasteurization and dehydration plants were supplied to enable governments to provide clean milk to children and nursing mothers and to stock quantities of dry milk in periods of surplus production. Among other programmes with long-range implications were training courses for child-care workers and specialists and the supply of equipment for handicapped children.

U.N.I.C.E.F., by action of the general assembly of the United Nations on Dec. 1, 1950, was continued for another three years with the presumption that in 1953 it could be made permanent. Steps toward the enactment of a declaration of the rights of the child were taken within the United Nations during 1950. A draft declaration, after amendment and approval by the Social commission, was submitted to the Economic and Social council, with the request that the council, after consultation with the Commission on Human Rights, transmit it to the general assembly.

Allocations late in 1950, illustrative of the programme of U.N.I.C.E.F., included $2,532,000 to nine Asiatic countries—Burma, Ceylon, India, Indonesia, Japan, Pakistan, Philippines, Thailand and Malaya and a new allocation of $500,000 to Korea to replace funds previously provided for maternal and child health projects, but used instead for emergency relief supplies. The $840,000 allocated to Latin America was added to the area reserve, and from existing reserves $528,000 was apportioned for projects in ten countries—Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Nicaragua and Paraguay. Funds in excess of $500,000 were made available for health services and relief in the middle east, $350,000 for Bacillus-Calmette Guérin

(B.C.G.) anti-tuberculosis vaccination campaigns and $150,000 (previously allocated) for an anti-bejel/syphilis campaign in Iraq. Child-feeding programme in Israel and Palestine, with other relief for Palestine refugees were made possible mostly by previous allocations for the first half of 1951. The work in Europe included allocations of $185,000 to Greece and $586,000 to Yugoslavia for food supplies required through the early months of 1951 for aiding 1 million children in Greece and 1,400,000 in Yugoslavia.

The World Health organization, whose membership in 1950 consisted of 75 countries, co-operated with U.N.I.C.E.F., the Food and Agricultural organization and various national agencies in efforts to combat those diseases which claim many victims among children in devastated and under-developed countries—malaria, tuberculosis and venereal diseases, received foremost attention; plague, cholera, trachoma, yaws and smallpox also were reduced in countries where their control was most needed. The Maternal and Child Health section of W.H.O. developed a long-range programme of research, information, instruction and guidance, including the setting up of maternity and child health clinics.

United States. The year was marked by the mid-century White House Conference on Children and Youth, held from Dec. 3 to 7 in Washington, D.C.

Health agencies and public health officials focused attention in 1950, as never before, on cerebral palsy and the possibilities of training children and youth thus handicapped. It was estimated that 150,000 children in the U.S. had cerebral palsy of such degree as to require service in special clinics and educational establishments.

The latter part of 1950 saw a marked increase in the employment of women, including many mothers, with a consequent increase in the demand for day care. The Child Welfare League of America and several federal agencies began to study ways and means to bring back into use much of the day care service discontinued during 1946 and 1947. But by the end of the year there were no substantial provisions for such expansion. (*See* also JUVENILE DELINQUENCY; YOUTH EMPLOYMENT.) (AN.; H. W. HK.)

CHILE. Republic occupying the Pacific coast of South America for about 2,600 mi. and having an average width of only 110 mi. Area, 286,323 sq.mi. Pop.: (1940 census) 5,023,539, (mid-1950 est.) 5,806,000. The racial composition, largely of European origin, includes *mestizos* (15%) and Indians (4·2%). The latter, numbering *c.* 231,700, are of three branches: the Fuegians, who live in or near Tierra del Fuego; the Araucarians in the valleys or on the western slopes of the Andes; and the Changos of the northern coastal region. Language: Spanish. Roman Catholicism is the predominant religion. The capital is Santiago (pop., including suburbs, 1949 est., 1,161,633). Other chief towns (pop., 1946 est.): Valparaíso (198,068); Viña del Mar (98,156); Concepción (87,620); Antofagasta (47,326); Talca (44,859). President, Gabriel González Videla.

History. During 1950 Chile enacted a series of measures designed to contain inflation, bolster its dollar reserves, improve its economic life and encourage the industrialization of the country. The government tried to reach these objectives by curbing rents, avoiding profiteering, granting bonuses for urgently required imports, raising taxes and lowering tariffs in order to encourage foreign trade.

Early in the year the government was faced with widespread strikes and disorders in the mining areas which forced it to declare a state of emergency: Santiago and Valparaíso were left without newspapers and public transport. The banks and insurance companies could not carry out their functions as usual. The " national concentration " cabinet, representing the principal political forces in the country, resigned after 19 months in office and President González threatened to appoint an all-military cabinet. Towards the end of February the strike situation was settled and a new cabinet representing four political parties was appointed.

In April the president visited the United States as a guest of President Truman. In addressing the U.S. congress González explained why his administration had been forced to outlaw the Communist party. He said that the Communists did not respect civil liberties and constituted a threat to the peace of the hemisphere.

During González' absence the minister of the interior, Pedro Enrique Alfonso, acted as president. He announced that Chile would maintain its commercial exchange rate of 60 pesos to the dollar (decreed early in the year upon the recommendation of the International Monetary fund) and that foreign investors would receive special consideration in tax matters and guarantees for a fair return on their investments.

Chilean economic recovery received a setback when the two cents a pound tariff on copper imports which the U.S. had temporarily suspended during World War II was reimposed in June. This would cost the copper industry an estimated $5 million a year, which, in addition to the drop of approximately seven cents a pound in the price of this metal during 1949, constituted a serious economic blow. Negotiations for a new commercial treaty with the U.S. were initiated. The drop of $12 to $13 a ton in the price of synthetic nitrates complicated the economic situation still more, but partial compensation was found in the export of petroleum to Uruguay from Tierra del Fuego. A steel plant, the second largest in South America, was built in Huachipato, near Concepción and the port of Talcahuano. (J. McA.)

Education. Schools (1945): state primary, pupils 452,826; private primary, pupils 93,185; secondary, pupils 55,000. Universities 3: state University of Chile, the Catholic University of Santiago and the University of Concepción.

Agriculture. Main crops (1949-50, short tons): wheat 915,000; barley 88,000; oats 48,500; potatoes 500,000; maize 71,000; rice, paddy 92,500. Production of wine (1948): 91,977,000 U.S. gal. Livestock (1949): cattle 2,344,188; sheep 5,749,069; goats 810,206.

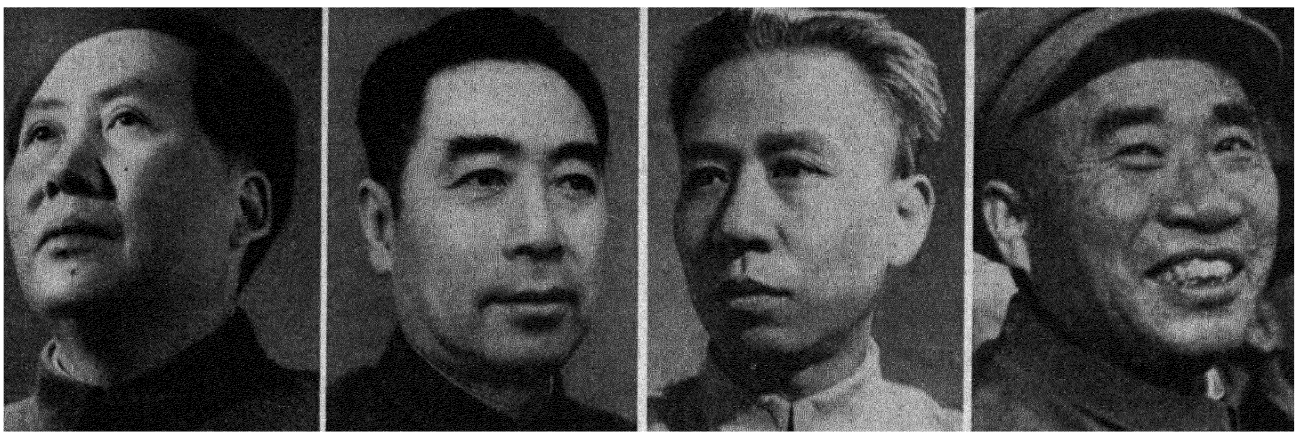
Industry. Manufacturing establishments (1948): 5,585 with capital of 1,466·6 million pesos and 296,000 employees. During 1949, the establishment of 482 new industrial enterprises was authorized. Production (1949): woven cotton fabrics 29,750,000 yd.; wool yarn 400 short tons; cement 545,000 tons; pig iron 20,500 tons; steel 34,750 tons. Electric energy production (1949): 1,284 million kwh. Chile is the leading mineral-producing country in South America. Production (1949, short tons): copper 409,057; nitrate of soda 1,947,187; iron ore 3,017,836; coal 2,289,135; gold 179,630 troy oz.; silver 789,654 oz. In the first reported 12 months of commercial production (Oct. 1949-Sept. 1950), wells on Tierra del Fuego produced 68,660 metric tons (about 490,000 bbl.) of crude petroleum.

Foreign Trade. (Million gold pesos, 1949): exports 1,493·2; imports 1,474·9. Leading exports were copper bars (50%); nitrate of soda (21%); cereals, vegetables and fruits (7%). Leading imports included industrial machinery and equipment (22%); oils, paints and chemicals (13%), metals and manufactures (13%) and transport materials, including vehicles (10%). Principal customers: U.S. (49%), U.K. (8%). Principal suppliers: U.S. (54%), Peru (10%), U.K. (8%).

Transport and Communications. Railways (1949): 5,434 mi. of which 3,859 mi. were owned by the government and most of the remainder by the Antofagasta and Bolivia Railway Co., Ltd. Roads (1947): 1,785 mi. of international roads, 3,815 mi. of national roads and 26,300 mi. of provincial roads. Merchant marine (1949): 91 steamers and motorships (100 tons and over) aggregating 175,157 gross tons. There were 126,000 telephones in 1949.

Finance and Banking. (Million pesos) budget: (1949 actual) revenue 15,823·2, expenditure 15,415·8; (1950 est.) balanced at 15,649·6; (1951 est.) balanced at 21,200. Funded foreign debt (Dec. 31, 1949): U.S.$ 215 million. Total internal debt (Dec. 31, 1948) 6,762 plus guarantees of 1,397. Currency circulation (Sept. 1950; in brackets Sept. 1949): 5,629 (4,665). Deposit money (Sept. 1950; in brackets Sept. 1949): 11,426 (10,503). Monetary unit: *peso* with an official exchange rate of 31·00 pesos to the U.S. $ and 86·80 pesos to the £ sterling. (J. W. Mw.)

CHINA. The most populated and second largest country of the world, China is a people's republic in Asia bounded N.E., N. and N.W. by the U.S.S.R., W. by Afghanistan,



The leaders of the central people's government of China. Left to right: Mao Tse-tung, president; Chou En-lai, prime minister and foreign minister; Liu Shao-Chi, deputy prime minister and secretary of the general Chinese Communist party; and General Chu Teh, deputy prime minister and commander in chief of the army.

S.W. and S. by India and S. by Nepal, Bhutan, Burma and Indo-China. The table below shows how the total area of 3,876,956 sq.mi. is composed, and the distribution of population (no census was ever taken):

	Area (in sq.mi.)	*Population*	
China proper (18 provinces)	1,444,626	409,137,000	(1936 est.)
Western China (Sinkiang, Chinghai and Sikang .	1,118,323	6,524,000	(1936 est.)
Inner Mongolia (4 provinces) . . .	326,285	5,143,000	(1936 est.)
Manchuria . . .	503,127	43,234,000	(1940 census)
Formosa (Taiwan) (*q.v.*).	13,857	5,872,000	(1940 census)
Kwantung (including Port Arthur) . . .	1,444	1,750,000	(1938 est.)
Tibet (*q.v.*) . . .	469,294	3,000,000	(1948 est.)
Totals . .	3,876,956	474,660,000	

According to the official estimate of April 1950 the total population of China was 475 million. Language: Chinese, with a number of dialects, the most important being the Mandarin (or *Kuanhua*) which dominates nearly four-fifths of China proper. Religions: Confucianism, Taoism and Buddhism; about 10% of the population is Moslem; there are also Chinese Christians of various denominations. Chief towns (pop., 1948 est.): Peking (*q.v.*, cap., 1,721,546); Shanghai (4,630,385); Tientsin (1,772,840); Canton (1,128,165); Nanking (1,113,972); Mukden (1,021,057); Chungking (985,673); Tsingtao (850,308); Harbin (760,000); Hankow (721,598); Sian (628,449); Dairen, under Soviet occupation (543,690).

During the year China continued to have two governments:

(1) the Communist, formed in Peking on Oct. 1, 1949, with Mao Tse-tung (*q.v.*) as president of the republic (chairman of the central people's government council) and Chou En-lai (*q.v.*) as prime minister (chairman of the state administrative council) and minister of foreign affairs.

(2) the Nationalist, headed by Generalissimo Chiang Kai-shek (*q.v.*), which in Dec. 1949 was moved from Chengtu to Taipei, Formosa.

History. A survey of China during 1950 presents a curiously mixed pattern, between encouraging reports of the success with which the Communist government appeared to be handling the huge problems of administering a country half ruined by 13 years of invasion and civil war, and the consternation caused by the Chinese invasion of Tibet and Korea and the undoubted evidence of help given to the Communist Vietminh in Indo-China. The bad effect of this aggression was not lessened by the brusque tone adopted by Peking in all international correspondence and the frenzied hymns of hate of the U.S. and " imperialists " in general ceaselessly chanted by Peking radio and press.

The Chinese-Soviet Alliance. In Communist eyes the highlight of the year was the treaty with the U.S.S.R. signed in Moscow by Chou En-lai and A. Y. Vyshinsky, in the presence of Mao Tse-tung and Joseph Stalin, on Feb. 14 after seven weeks' bargaining. Each country pledged itself, if the other was attacked, to come to its aid, to respect each other's sovereignty and integrity, to develop their mutual economic and cultural relations and to observe " non-interference in each other's home affairs." The U.S.S.R. also promised to restore to China the Chinese Eastern (now Changchun) railway and to evacuate Port Arthur, both as soon as peace should be signed with Japan and in any case within two years. A loan of U.S. $300 million was granted to China to be spent on industrial machinery in the U.S.S.R., redeemable in 10 annual instalments starting at the end of Dec. 1954.

Critics abroad pointed out the utter inadequacy of this loan to China's enormous needs; that the U.S.S.R. had given little but promises; that, in particular, her occupation of Dairen was put off for discussion until after conclusion of peace with Japan; and that there was no mention of Sinkiang, in which the U.S.S.R. had extracted from the Nationalist government just before its collapse a monopoly of all air transport. But the treaty was hailed in Peking with almost hysterical applause and Mao Tse-tung was greeted on his return with equal rapture. In April other agreements were signed with the Soviet Union: one on general trade matters; another for three air routes to be managed jointly between Peking and Chita, Irkutsk and Alma Ata; and two for the joint exploitation of oil and non-ferrous metals in Sinkiang. Much political difficulty, however, was believed to have occurred in putting the Sinkiang projects into effect.

Economic Difficulties. The first half of the year was a bad time for China. In March it became known that both north and south were suffering severe famine due largely to the civil war, poor harvests and floods. On March 15, Tung Pi-wu, the vice premier, admitted that 7 million refugees were in dire want and equally distressing reports came from General Lin Piao, governor of the south. Offers of help from abroad were rejected and the Communists claimed to have successfully coped with the famine by distributing grain from Manchuria.

The blockade announced by Chiang Kai-shek after his retreat to Formosa paralysed the trade of Shanghai and ports southward, though Tientsin and Tsingtao being beyond reach of Chiang's aeroplanes kept open. On Feb. 6 a murderous raid by Nationalist aircraft on Shanghai wrecked the power station, part of the water supply and killed large numbers of people. The foreign community combined in

Examples of contemporary art in Communist China taken from "Northern Wood-Engravings," published in Peking.



"A New-Year Party for Troops" by Ku Yuan.



"The Return of a Labour Hero" by Hsai Feng.



'Encouraging Peasants to Read a Newspaper" by Hsai Feng.



"A People's Judge Adjudicating a Lawsuit" by Ku Yuan.

protesting to the secretary general of the United Nations and such bombing was not repeated. But there was no improvement in trade until, on the outbreak of the war in Korea, the United States neutralized Formosa, which ended the blockade. British merchants were particularly hard hit since, although doing no business, they were forced to continue paying their Chinese employees in full and to do so had to draw heavily on their home offices.

The recapture of Hainan in the Gulf of Tongking in April (the most shameful of all the Nationalists' defeats in view of the long warning they had and the strength of their position) completed the Communists' conquest of China. But others besides British merchants were disturbed by the country's economic condition. Faced with enormous inflation and general stagnation the Communists had been driving over-hard, with ruthless taxation, enforced victory loans and suppression of so-called luxury industry and with increasing state monopoly of business in violation of the principle of "new democracy" which was supposed to ensure a fair partnership between state and private enterprise. Riots among peasants in the Yangtze were admitted by Peking in April, the cause of which was undoubtedly taxation and seizure of grain to keep labour in the towns quiet. Anxiety about the state of mind of the peasants cropped up repeatedly in speeches by Mao Tse-tung, Liu Shao-chi (*q.v.*), deputy head of the government, and others.

In June a conference took place in Peking between the government and leading Chinese business men, at which the latter told the government plainly that it was causing wide-spread unemployment and bringing China to the verge of ruin. The result was to show remarkable ability in the Communists to face facts and modify their methods. Many taxes were repealed, others were amalgamated in more bearable forms, enforced loans were suspended and state trading revised in a manner which, although retaining general state control of economy, gave considerably greater freedom to private enterprise. It was interesting to note that British merchants in Tientsin were able to act as agents for the government in selling what it wished to export, soya beans, bristles, etc.

Communist Theory and Practice. Remodelling of policy was also a feature of the July meeting of the national committee of the People's Political Consultative Conference (temporarily China's parliament) when a revised agrarian law was passed, the chief features of which were concessions to landlords, especially those who used their land for industrial purposes; compensation to schools, hospitals and other public institutions for the seizure of land on which they had depended financially in order that their work might not suffer; and a revised scheme of taxation. The importance of gradualness in the whole process of land reform was stressed, with the danger of over-sudden changes in the great western and southern areas which had only lately come under the government's control.

Among records of progress put before the P.P.C.C. it was interesting to note that China had three state-owned film studios, 467 public and private cinemas, 400 dramatic companies with 4,000 members, 624 newspapers of which 165 were dailies, 887 state-run book stores and 83 publicly and privately owned broadcasting stations. The P.P.C.C., however, learnt with pain that the Communist party was not as much loved in China as it would like to be, because of the overbearing ways of provincial officials who were admonished to be more tactful: not blunt dictation, but

gentle persuasiveness was the way to win the Chinese people to the merits of Communism.

In this connection it might be said that the Peking government was unquestionably a Communist dictatorship, all policy and decisions being made by a central council of 56 members presided over by Mao Tse-tung as chairman and transmitted to the nation through an elaborate network of regional and village councils. So long, however, as these councils adhered generally to the party line, it seemed that they were allowed a fair measure of freedom in adapting their ways to the myriad widely differing local customs of China. The weakness of the new government was its lack of trained administrators. The Communist party numbered only 5 million (or 1% of the population); admission to it was strictly controlled; and the vast majority had no training in administration. Great numbers of Kuomintang officials were taken over and were often prone to out-Herod Herod, in their eagerness to prove repentance for the past and fidelity to the new order. Hence no doubt the very different accounts of conditions from different centres, according to the nature of the official in charge.

The reforms adopted in the summer and the lifting of the Nationalist blockade brought considerable improvement in general conditions in the autumn. Not only was inflation checked but between May and September the People's Bank dollar (*jenminpiao*) improved from 97,600 to 72,000 to the £, while the increasing number of private bank deposits proved the growth of public confidence. The price of rice in Shanghai was brought under better control at an average since May of around £3 the picul (133 lb.) with not excessive fluctuations, and prices of cotton cloth were similarly brought down. In general the foreign business community fared much better in the autumn and was by no means unhopeful. Credit was due to the Communists for their energy in restoring the railways—on March 3 the first train ever to reach Hong Kong from Shanghai arrived in Kowloon, a journey of 1,000 mi. —while the Yangtze, which in recent years had seemed almost deserted, was crowded with traffic of junks and steamers, some of the latter bought from local British shipping companies, some new ones bought by Peking from Canada.

One specially noticeable feature was the heavy buying of industrial plant by the government's agents in Hong Kong. These men were described as keen and business-like and they did not care where what they bought was coming from (even from "imperialist" America) if it was what they wanted. In the first seven months of 1950, Hong Kong's exports to China were valued at £37,600,000, or more than three times the figure for the same period in 1949. Since August the rate of buying by the Communists in Hong Kong was stated to have gone still higher.

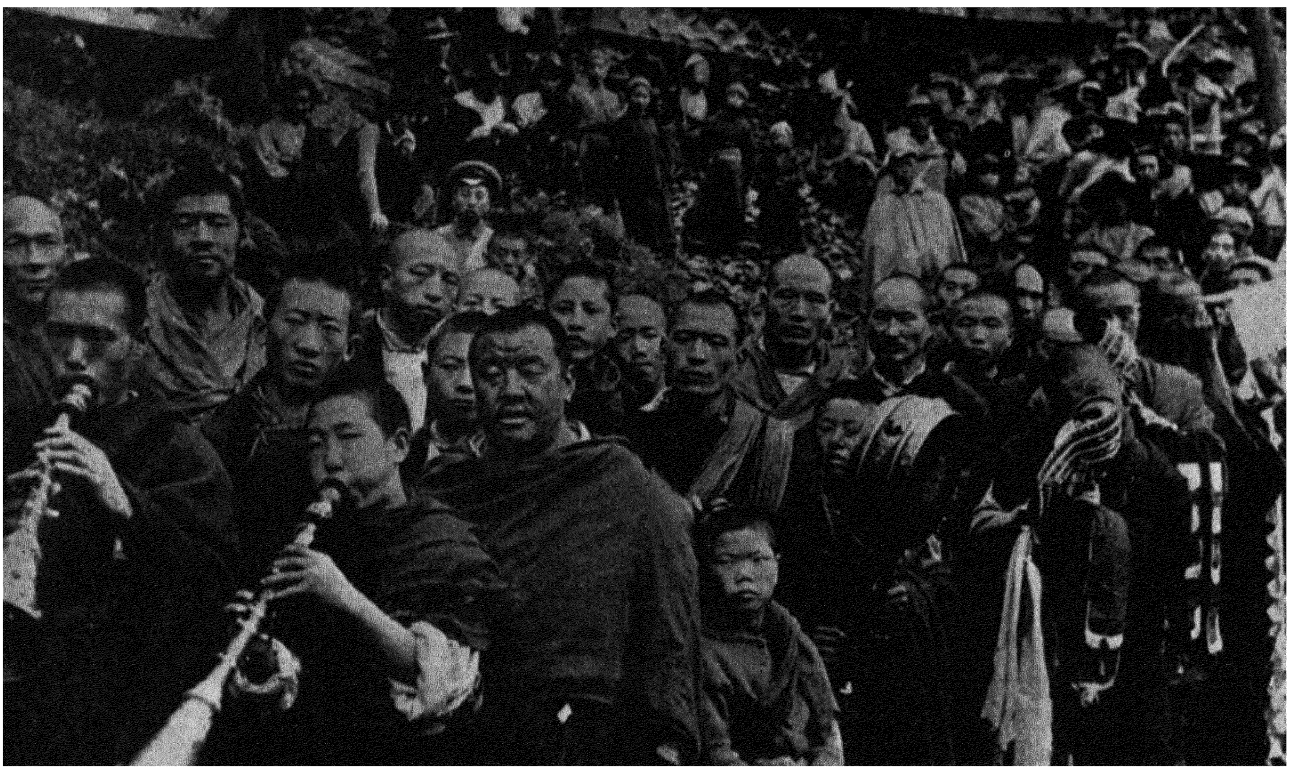
The Position of Christian Missions. Reports about the vast missionary enterprise in China (which numbered many thousand workers, Roman Catholic and others, and controlled hundreds of hospitals, schools and colleges) varied widely, conditions being more difficult in the north, where the Communists were longest established than in the south, and also generally better in the towns than in the country. Large colleges such as Yenching at Peking and Cheloo at Tsinanfu reported that their work continued normally. But in all missionary colleges and schools students and teachers alike (the latter chiefly in the vacations) were compelled to undergo daily instruction in Marxism-Leninism. Country missionaries were free to hold services but they were tied to their places of residence; the long evangelizing tours (so-called itinerating) which were an important part of their work were forbidden.

In July a section of Chinese Christian workers led by the Y.M.C.A. (several of whom had sat in the People's Political Consultative Conference which inaugurated the government in Peking, on Oct. 1, 1949) had an interview with Chou En-lai, the premier, who pointed out that the constitution provided complete freedom of religion but added that foreign missionaries had made themselves the tools of imperialism and it was therefore impossible to trust them: dependence on foreign subscriptions must be carefully eschewed. After this interview the group concerned published a declaration strongly tinged with politics in which, after confessing imperialist sins by their predecessors, they pledged themselves to support the Communists' common programme, "to oppose imperialism, feudalism and bureaucratic capitalism . . . especially the United States' imperialist intrigues to rear reactionary power through the medium of religion." They also promised "to educate Chinese Christians to understand and support the government's land reform policy." This, in view of what was said of the government's anxieties regarding the peasants, was particularly interesting.

This declaration was strongly demurred to by other Christians; and the Chinese bishops of the (Anglican) Church Missionary society issued a statement which, after emphasizing that imperialism and its fellow "isms" were intrinsically abhorrent to the Christian faith, dealt mostly with the daily duty of Christians and the special need of testifying to their faith by their way of life. Of the position of the Roman



Smoke rising from burning drums of petrol after Chinese Nationalist planes had bombed the town of Shumchun, Feb. 6, 1950. This photograph was taken from British territory in Hong Kong.



An official Chinese government photograph showing Tibetans, some with traditional musical instruments, greeting Chinese Communist troops in the invasion of Tibet which started in Oct. 1950.

Catholics, the oldest and by far the largest Christian community in China, there was little information. During the persecutions in north China in 1947 the Roman Catholic priests were the worst sufferers, in view of the Vatican's denunciations of Communism. In 1950 their position seemed to have been much the same as that of other denominations. So far as could be ascertained one or two non-Roman Catholic missionary doctors were admitted, but no pastoral missionaries had got further than Shanghai. If missionaries left China on furlough, there appeared little hope of their getting back. As one returned missionary put it " the door opened only one way." The policy of the Chinese government seemed to be to allow the foreign missionaries to die out by the natural process of time.

The movements of all foreigners were closely circumscribed. The Communist officials, it was agreed, were courteous though distant, and they showed no discrimination between foreigners and Chinese.

China and Great Britain. On Jan. 1 Great Britain, alone among the Commonwealth governments, recognized the Communist government of China and on Feb. 13 J. C. Hutchison, chargé d'affaires in Nanking, was sent to Peking to arrange the resumption of diplomatic relations. On this, however, a complete deadlock afterwards prevailed. China objected that Great Britain did nothing to secure its admission to the United Nations. (In the first discussion in February the British delegate abstained from voting, but on all more recent occasions had voted in China's favour.) China also felt keenly on the case of the 70 aircraft at Hong Kong, also claimed by the Nationalists and General Clair L. Chennault (of the U.S.) who claimed to have bought them. The Supreme Court in Hong Kong was still trying to decide the question of ownership. The aircraft originally belonged to the China National Aviation corporation and therefore, in Peking's view, should be handed to the Communists, with other Nationalist property on their conquest of China. Great Britain's war on the Communists of Malaya was probably not without effect in Peking. Relations were not improved by the Chinese seizure of the old barracks in the British embassy in Peking (for many years used as students' quarters) on April 13, though the retention by Great Britain of this property was guaranteed by the treaty of 1943. Similar property belonging to the U.S., France and the Netherlands had been seized by the Chinese government in January.

Including the U.S.S.R. and its satellites, 17 governments recognized Peking, but neither France nor any of the Latin countries. The most important of the foreign ambassadors who yet reached Peking was the Indian, K. M. Panikkar, who presented his credentials on May 20. A trade mission from Eastern Germany arrived in Peking in the autumn and concluded a trade agreement with China on Oct. 11.

Chinese Intervention in Korea, Tibet and Indo-China. On the invasion of South Korea by the Communists on June 25, the U.S. announced as part of the measures decided on by the United Nations against this aggression that its navy would neutralize Formosa against both invasion and use as a base for blockading China. This roused the greatest fury among the Chinese for whom Formosa was not only Chinese territory, but also the last stronghold of the detested Chiang Kai-shek.

On July 17 and again on Aug. 30 there were reports of large troop movements from south China to the regions of the Manchurian-Korean border. Nothing, however, happened until Nov. 1 when the Chinese and North Koreans delivered a sudden heavy attack on the U.N. forces advancing towards the Yalu and drove them back. A lull ensued during which the U.N. forces resumed the advance, but on Nov. 26 the Chinese in great strength delivered another shattering blow, splitting the U.N. forces and compelling them to retreat. In these actions, it was noticeable that the Chinese government was not officially concerned. It was particularly stressed that the Chinese troops were volunteers flocking to the defence of their homes against the alleged plans of the U.S. to invade Manchuria and China and reinstate Chiang Kai-shek.

Early in October the Chinese invasion of Tibet, forecast on the establishment of the Communist government on Oct. 1, 1949, as a prime feature of their foreign policy, began from two directions—from Sining in the northeast, where the Chinese had won over the supporters of the Panchen Lama, antagonists of the Dalai Lama in Lhasa; and from Batang in Szechuan due east of Lhasa. The Chinese took the frontier towns of Jyekundo and Chamdo by about Oct. 18 but their further progress (perhaps because it was difficult to move a large force in the wild heights of Tibet in winter time) was by the end of the year obscure. On Oct. 26 the Indian government addressed a note to Peking urging the Chinese to agree to a peaceable settlement in Tibet, only to be told bluntly that Tibet was Chinese territory which China must occupy in order to prevent the imperialists from using it as an invasion base.

In October, too, the Vietminh (Communist) forces started a strong offensive in Tonking which compelled the French to abandon all their stations on the Chinese frontier except Monkay and by the end of November had driven them back to the triangle of the Red river delta. There was no doubt that the Vietminh had received artillery and other equipment from China and it was believed that numbers of their troops had been intensively trained in China. As if in justification Peking published, on Nov. 24, a long list of alleged bombing raids and incursions by ground troops by the French from Indo-China into south China.

Six successive demands were sent by Peking to Lake Success for the admission of Communist China during the year but without success, opinion among adverse states being hardened considerably by Chinese aggression in Korea. Freedom, however, was given to Peking to send delegates to raise the charge of " American aggression against Formosa." Flying by way of Moscow and London the delegation led by General Wu Hsu-yuan, head of the Russian and East European department of the Peking Foreign Office, reached Lake Success on Nov. 24. Four days later he sat at the table of the Security council and delivered a lengthy speech in which he denounced what he described as an " insolent provocation " of China by the U.S. He concluded that no peaceful solution of the Korean problem was possible before the complete withdrawal of the U.S. and other forces both from Korea and Formosa. (*See* UNITED NATIONS.)

(O. M. G.)

Education. Although substantial progress had been achieved since the 1911 revolution, in 1937 illiteracy in China was estimated to take in from two-thirds to four-fifths of the population. There were 229,911 elementary schools with 12,848,000 pupils (as against 2,794,000 pupils in 1911), but the total number of children of school age was estimated at 45 million. By 1947 the number of elementary schools had increased to 790,617 with 23,814,000 pupils; there were also 5,892 secondary schools with 1,878,500 pupils and 207 institutions of higher education with 149,000 students. In 1950 the people's government claimed 227 institutions of higher education with 134,000 students.

Agriculture. In an overwhelmingly agricultural country only 29% of the total area was arable land and only 20% was cultivated. Agriculture supported 70% of the population and contributed 80% of the national income. Small-scale farming predominated: by 1937 36% of farms were less than 1·5 ac. and 62% less than 4·3 ac. in size. Rice was the main crop and the main food in the southern and central provinces, whereas in the north wheat, millet and kaoliang (sorghum) predominated. Subsistence crops overshadowed commercial or industrial products in importance. Since land could ill be spared for the purpose, animal husbandry was little practised, and pasturage occupied no more than 1% of the arable land.

TABLE I. AGRICULTURAL PRODUCTION ('000 metric tons)
(22 provinces, that is, China proper and former Inner Mongolia)

	1931-37	1947	1948	1949
Rice, paddy	50,065	46,507	46,524	44,500
Wheat	21,743	23,647	23,990	20,600
Barley	7,871	7,574	7,428	6,600
Maize	6,497	6,724	7,467	6,500
Oats	881	703	795	730
Sweet potatoes	18,525	22,427	24,970	—
Potatoes	1,907	1,723	1,952	—
Soya beans	6,093	5,479	5,738	4,880
Broad beans	3,018	3,078	3,114	3,342
Dry beans	2,723	2,472	2,237	—
Dry peas	3,190	2,957	2,992	3,113
Cotton, ginned*	680	470	460	370
Tea (export only)	40·9	11·7	12·8	—

* Including Manchuria.

Production of millet in the 18 provinces (China proper) amounted in 1936 to 6,437,000 metric tons and that of kaoliang to 7,271,000 tons. Agricultural production in Manchuria (yearly averages 1931-37, '000 metric tons) was as follows: soya beans 3,851; maize 2,007; rice, paddy 441; oats 45. In 1939 Manchuria produced ('000 metric tons): kaoliang 5,092; soya beans 4,361; millet 3,888; maize 2,716; wheat 1,046; rice, paddy 767. The sugar production amounted in 1948 to 360,000 metric tons in the 22 provinces and to 26,000 tons in Manchuria. No statistical data, indeed not even reliable estimates, were known for 1950. China's needs in two main crops were estimated annually at 52 million metric tons of rice and 25 million tons of wheat. In September it was, however, announced from Peking that the 1950 cotton harvest was expected to be around 700,000 metric tons.

Primitive methods, lack of standardization and grading, had reduced tea production during the second half of the 19th century. In 1867 tea constituted 60% of exports but in 1936 only 3%.

TABLE II. LIVESTOCK ('000 head, 22 provinces)

	March 1938	Oct. 1946	Oct. 1947
Cattle	23,081	18,998	18,200
Pigs	59,704	53,758	59,510
Sheep	12,411*	9,191	10,450
Goats	21,933†	13,609	13,976
Buffaloes	11,574*	9,320	9,460
Horses	4,080	2,039	2,033
Asses	9,018*	7,637	8,561
Mules	3,624	2,007	1,905
Poultry	246,688	196,743	209,335

* 1937. † 1935.

In Manchuria there were in 1938 ('000 head): pigs 5,335; horses 1,800; mules 565; asses 620.

Industry. The country had big reserves only of coal (estimated at 246,000 million metric tons). Iron ore reserves were estimated at 952 million tons, which was insufficient to establish a large industry. Known reserves of lead and zinc ore were also small, but copper was more abundant. Only of antimony and tungsten was China a leading world producer. One-quarter of the world's supply of silk was produced by China. This, however, was less than the amount contributed by Japan, which had adopted scientific methods.

TABLE III. INDUSTRIAL PRODUCTION
('000 metric tons, including Manchuria)

	1936	1947	1948	1949
Coal	41,900	16,700	13,800	15,500
Iron ore	3,360	150	158	364
Pig iron	1,535*	40	11	94
Steel ingots and castings	810	57	44	83
Cement	710*	749	550	—
Tin concentrates	10·8	4·1	4·9	4·3
Cotton yarn	394	299	336	200
Electricity (million kwh.)	3,130†	3,120	2,860	—

* 1935-39. † 1938.

Production of crude oil amounted in 1936 to 60,000 metric tons.

Foreign Trade. In relation to the population foreign trade was small and typical for a poor agricultural country exports consisting mainly of raw materials and imports of industrial products and even of food. The balance of trade was constantly adverse. In the Table IV imports and exports are given in Chinese national dollars (C.N.$), but because of constant inflation and depreciation of the currency the picture is much distorted.

TABLE IV. EXTERNAL TRADE (Million C.N.$)

	1936	1937	1938	1946	1947
Imports	941·5	953·4	886·2	1,501,165	10,652,326
Exports	705·7	838·3	762·6	412,112	6,376,504

Main sources of imports (1947): U.S. 50% India 9%, Great Britain 6·8%. Main destinations of exports: Hong Kong 34%, U.S. 23%, Great Britain 5%. Main commodities imported: cotton goods and raw cotton, rice, sugar, kerosene oil, metals and minerals. Main commodities exported: beans and products, raw silk, eggs and products, silk piece goods. (*See* also HONG KONG.)

Transport and Communications. The railways were all single-track, of small carrying capacity, and the system was wholly inadequate. The same may be said of the highway system of which only one-fifth was surfaced, and one-third was badly in need of repair. Railways (1949, excluding Formosa): 18,391 km. Rolling stock (1948): locomotives 2,477; passenger cars 3,694; freight cars 31,354. Passenger traffic (1948) 14,083 million passenger-km. Freight traffic (1948) 4,784 million ton-km. Roads (1949, excluding Formosa): 203,414 km. Licensed motor vehicles (1947): cars 16,160, commercial 39,870.

Shipping (July 1948): merchant vessels of 100 tons and upwards 371, gross tonnage 809,114. Air transport (1948; 1937 in brackets): million km. flown 34·7 (2·6); million passenger-km. 525·8 (17·2); million ton-km. of cargo 67·5 (0·34). Telephones (Jan. 1948): 244,028 including 160,000 private. Radio receiving sets (1939): 100,000.

Finance and Banking. Continued civil and foreign wars had never conduced to a balanced budget or a sound currency. The 1938 budget was supposed to be balanced at C.N.$ 1,000·6 million and that of 1939 at C.N.$ 2,859 million, but of the latter only one-fourth was covered by the revenue. The 1947 budget was estimated to be balanced at C.N.$ 46,004,100 million, but the revenue amounted only to C.N.$ 12,135,000 million. Postwar grants and credits to China by the U.S. (July 1, 1945-Dec. 31, 1949) amounted to $2,008 million and total foreign aid to $2,254 million.

The value of the C.N.$ was 30 U.S. cents in Dec. 1938 and 5 cents in Dec. 1941. By 1948 the C.N.$ became practically worthless: on Aug. 19 a new currency, the *gold yuan*, was introduced with an exchange ratio of C.N.$ 3 million for one gold yuan. The official exchange rate to the U.S.$ was to be 4 gold yuan, but by the end of 1948 it had risen to 20 gold yuan. As during 1949 Communist armies occupied all continental China the People's Bank dollar (*jenminpiao*) replaced the gold yuan with an exchange ratio of P.B.$ 1 = G.Y. 10. As budget deficit continued to be " covered " by increase of note circulation, the P.B.$ collapsed too and in May 1950 the U.S. dollar was officially quoted at P.B.$ 42,000. In September, however, it was announced from Peking that the jenminpiao was " stabilized " with the following exchange rates: U.S.$ 1 = P.B.$ 31,000 and £1 = P.B.$ 78,200.

(K. SM.)

CHOU EN-LAI, Chinese politician (b. Huaiyin, Kiangsu, 1898), descends from an old mandarin family. Educated at a secondary school in Tientsin, he went to Japan in 1917 and studied at Waseda university for a year and a half. He returned to China in 1919, but the next year went to France under the Mao Tse-tung worker-student plan. Having spent some time in Great Britain and a year in Germany, he returned to China in 1924 and joined the Chinese Communist party. He went to Moscow as a delegate to the 1928 congress of the Comintern and remained there until 1931 studying at the Chungshan university. Back in China, he joined the Kiangsi Communist republic and in 1934-35 took part in the " long march " to Yenan. He revisited Moscow in 1935 as delegate to the Comintern congress. During World War II he served as minister of foreign affairs of the Yenan government and from May 1944 to early 1945 took part in negotiations with Chiang Kai-shek, but no agreement could be reached. 'Chou again participated in talks in 1946 with General George C. Marshall who sought to establish peace between the two Chinas. Later Chou charged that U.S. aid to Chiang was keeping the civil war alive. When the Communists in 1949 extended their control over continental China, Chou on Oct. 1 was appointed premier and foreign minister of the new Chinese People's Republic. On Jan. 20, 1950, he joined Mao in Moscow and on Feb. 14 signed a 30-year treaty of friendship, alliance and mutual assistance. On Sept. 30, in Peking, he voiced the threat that the Chinese people would not stand aside should " the imperialists " invade the territory of North Korea.

CHRISTIAN DEMOCRATIC MOVEMENT. The aggravation of the world situation during 1950 hampered the efforts for closer association of the parties in western Europe loosely classed together as Christian Democratic, and, in particular, the realization of their social and economic policies. Their very success in the days of the resistance and liberation and in the five postwar years proved a source of weakness. They had gained an immense following most of which did not share the views and aims of the small group whose traditions went back to H. F. R. de Lamennais. To the newcomers with their 19th-century Liberal and right-wing background Christian democracy meant primarily a rallying ground against Communism, and, as mass-parties anxious to maintain parliamentary majorities, they gave a conservative impetus to the movement and at the same time checked the pluralist and " anti-clerical " leanings of the original leaders. It also became obvious that, in the political situation in which they found themselves, the Christian Democrats as the leading political groups in France, Italy and Germany lacked the necessary experience, leadership and the ability to translate their ideals into concrete political terms. Confessional allegiance proved an obstacle to their untrammeled work as political parties, and the label Christian only too easily served as a sanctuary where politics were not to interfere. The problem of Christian democracy—so some of its critics thought—was not so much that of a Christian Democratic party as one of Christians active in democracy. This tendency was emphasized by the isolation of the left-wing groups. These were led in France, by the Marquis Charles d'Aragon; in Italy by Amintore Fanfani; in Western Germany by Karl Arnold and Werner Hilpert.

The French Mouvement Républicain Populaire (M.R.P.) held its sixth national congress at Nantes in May. Georges Bidault was re-elected chairman. The congress affirmed the party's attachment to the principle of proportional representation but rejected the double-ballot system favoured by the Radical party. The French invitation to join discussions on the Schuman plan was accepted by Germany, Italy and the Benelux countries, all of which had held their Christian Democratic lead in 1950. The death in France of Marc Sangnier (*see* OBITUARIES) was a great loss to the Christian Democratic movement in Europe.

In Belgium the " royal question " overrode all other issues of the Parti Social Chrétien. It opposed first the king's " surrender " to the Liberals and Socialists, but later—in the interest of national unity—accepted the bill transferring the royal prerogatives to Prince Baudouin.

In Italy, the country with the largest Communist party-membership in Europe, the Democristiani were mainly concerned with the strengthening of their defences. In April the Christian Democratic, Republican and Social Democratic trade unions formed an anti-Communist union, the C.I.S.L. (Confederazione Italiana dei Sindacati dei Lavoratori) (*see* also TRADE UNIONS). In July the Christian Democratic party assumed responsibility for a national propaganda campaign for Italian unity in defence of the country's interests, in order to neutralize Communist propaganda for the Stockholm " peace " campaign and Communist opposition to Italian participation in Atlantic defence. The Democristiani also made their influence felt in the hitherto Communist-dominated partisan movement.

The German Christian Democratic union (C.D.U.) held their annual congress at Goslar in October. Chancellor Konrad Adenauer was re-elected president and under a new statute the party was reorganized on an all-German basis, with only the Bavarian Christian Social union retaining its separate identity, though closely linked in a working committee. The new structure of the C.D.U. seemed to indicate that the federal tendencies of the past years had more or less been abandoned. The Christian Socialist wing had formerly attracted many of the workers and younger people. The dominant problem was German defence, and Adenauer had the difficult task both of countering the pacifist arguments of the Socialist and Protestant opposition and of convincing the Germans that without some measure of German rearmament the threat of the eastern police army and the Soviet divisions could not be met. The remnant of the C.D.U. in the Soviet zone in September re-elected Otto Nuschke as president and proclaimed its support for the " peace " policy of the Soviet Union.

In Austria the Volkspartei in the communal elections remained the strongest party and the government successfully

CHRISTIAN DEMOCRATIC PARLIAMENTARY REPRESENTATION
(Figures in brackets are those of the preceding election)

Country	Party corresponding to Christian Democratic	Date of last elections	Votes obtained	% of total votes	Seats obtained by C.D.'s	Total no. of seats
AUSTRIA	Österreichische Volkspartei	Oct. 9, 1949	1,844,850 (1,602,244)	44·2 (49·9)	77 (85)	165
BELGIUM	Parti Social Chrétien	June 4, 1950	2,354,965 (2,190,898)	47·7 (43·5)	108 (105)	212
FRANCE	Mouvement Républicain Populaire	Nov. 10, 1946	5,033,430 (5,589,130)	26·0 (28·2)	160 (167)	619
GERMANY	Christlich-Demokratische Union	Aug. 14, 1949	7,357.579	30·0	139	402
	Zentrum (Roman Catholics)		727,343	2·9	10	
NETHERLANDS	Katholieke Volkspartij	July 7, 1948	1,531,326 (1,466,582)	31·5 (31·1)	32 (32)	100
ITALY	Democrazia Cristiana	Apr. 18, 1948	12,751,841	48·7	307	574
SWITZERLAND	Catholic Conservative Party	Oct. 27, 1947	—	—	44 (43)	194

weathered the Communist and Soviet supported attempt at a general strike.

The Nouvelles Equipes Internationales, the organization which seeks to co-ordinate the work of the Christian Democratic parties in Europe, met in April at Sorrento, Italy. Thirteen countries were represented, and the Youth group was particularly active. The young members, meeting separately at Constance in October, founded a European Information centre with headquarters in Rome, to be conducted by Francesco Nobili. The resolutions showed the deep concern of the young members for the speedy creation of an effective European parliament and the introduction of European citizenship. (M. DK.)

CHRISTIAN SCIENCE. Christian Science is a religion founded by Mary Baker Eddy and represented by the First Church of Christ, Scientist, in Boston, Massachusetts, known as the Mother Church, and approximately 3,030 branches located throughout the world. There were also in 1950, 112 college and university Christian Science organizations founded in accordance with the by-laws of the Mother Church.

The year marked the 75th anniversary of the publication of the Christian Science textbook, *Science and Health with Key to the Scriptures*, which was published in 1875. This textbook is used in conjunction with the Bible at all Christian Science services.

The Wartime Activities committee continued its service, which was increased because of the hostilities in Korea. Foodstuffs and clothing amounting to more than $200,000 were supplied during the year to overseas countries. This was in addition to that which was contributed by individual branch churches and individual Christian Scientists. The work of the Christian Science Camp Welfare Activities was intensified. Christian Science chaplains were serving with the armed forces in addition to volunteer workers. This branch of the work of the Christian Science movement was accelerated as the demand for chaplains to serve in the war zone increased.

The church rendered prompt and effectual aid to victims of the floods in Winnipeg, Canada, serving those in need regardless of race or creed.

The Christian Science Publishing society reported that during 1950 the circulation of all its periodicals, which were published in seven foreign languages, and the *Christian Science Monitor*, reached the highest levels since their founding.

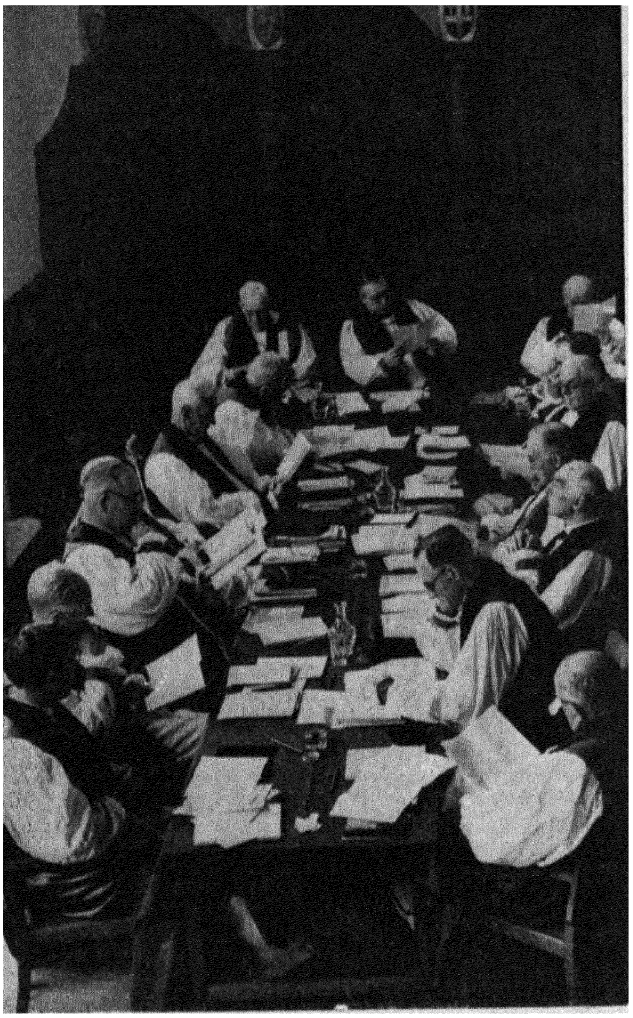
Edmund Stevens, chief of the Mediterranean news bureau of the *Monitor*, was awarded the 1950 Pulitzer prize for distinguished reporting on international affairs, in his series, "This is Russia—Uncensored," published in the *Monitor*. (GE. C.)

CHURCHILL, WINSTON LEONARD SPENCER, British statesman (b. Blenheim palace, Oxfordshire, Nov. 30, 1874). For his biography and political career during the two World Wars see *Encyclopædia Britannica*. After the defeat of his government in the general election of 1945 he led the Conservative opposition in the House of Commons. His speech at Fulton, Missouri, in 1946 was regarded as the starting point of the movement for European unity and for a Council of Europe.

Winston Churchill's preparations for the general election of Feb. 23, 1950, included broadcasts on Jan. 21 and Feb. 17. In the election, the Conservatives and their supporters were again defeated but by a small margin; the Conservative leader was returned at Woodford and continued to lead the opposition. In April he unveiled a memorial tablet in St. Paul's cathedral to Admiral of the Fleet Lord Keyes (1872-1945) and his son. In May he received the freedom of Worcester and inaugurated a monument to the first Earl Baldwin of Bewdley (1867-1947) at Astley, Worcestershire. In June he was awarded the Chesney Gold medal by the Royal United Service institution for outstanding contributions to military literature; the third volume of his memoirs of World War II, *The Grand Alliance*, was published in July. On July 20 he received the freedom of Bath. At the consultative assembly of the Council of Europe at Strasbourg on Aug. 11, his proposal for the creation of a European army was approved by 89 votes to 5 with 27 abstentions. On Aug. 13 he received the freedom of Nancy. In a broadcast on Aug. 26 he again gave a warning that Great Britain was in great danger through unpreparedness in defence matters but said that he did not believe a major war to be imminent. On Oct. 1 the leader of the opposition celebrated the 50th anniversary of his first election to parliament. With Mrs. Churchill he visited Copenhagen, Oct. 9-11, as guests of King Frederik of Denmark and Queen Ingrid. During the visit he received an honorary doctorate of philosophy and arts of Copenhagen university. On Dec. 11 he received the freedom of Portsmouth, at a ceremony deferred from 1941. On Dec. 16 he flew to Marrakesh, Morocco, for a month's holiday.

CHURCH OF ENGLAND. Preliminary conversations between the Church of England and the Church of Scotland were opened at Durham in Jan. 1950 by two commissions headed by the bishop of Derby, the Right Rev. A. E. J. Rawlinson, and by Dr. William Manson respectively; they were continued at Edinburgh in June. A pamphlet entitled *Church and Press*, by Robert Stokes, was published, outlining the proper method for the organization of publicity by the church. In January also Sir Stafford Cripps gave the first of a series of evening sermons by laymen at St. Paul's cathedral. In February the leaders of the three political parties, together with 300 parliamentary candidates, attended a crowded election service at St. Paul's. Dr. G. L. Prestige became canon of St. Paul's in October. A mission to the University of Oxford was conducted by the bishop of Bristol, the Right Rev. F. A. Cockin. In May a crowded meeting was held in the Albert hall to inaugurate the "follow-up" in 1951-52 of the mission to London (1949). A diocesan mission was launched at Worcester in October.

Work on the base of the tower and the roof over the north transept of the new Guildford cathedral was begun. Extensive repairs were undertaken on York minster and Manchester cathedral and on the spires of Lichfield, Norwich and Salisbury.



The Archbishop of Canterbury (top right) presiding over the upper house of the Convocation of Canterbury at Church House, Westminster, May 1950.

The restoration of Dorchester abbey was completed. A wing of Lambeth palace was opened, after war-damage repairs, as a hostel for bishops and other dignitaries when visiting London. Thirty-three dioceses contributed £30,600 towards the £40,000 required to train ordination candidates for one year (on Trinity Sunday collections were taken in most churches for the same fund).

The Very Rev. Spencer Cecil Carpenter, dean of Exeter, retired in April and was succeeded later in the year by Canon A. R. Wallace, formerly headmaster of Sherborne. Jewels worth £20,000 were stolen from the altar of Exeter cathedral. In July the King and Queen and Princess Margaret visited the cathedral for the celebrations of the 900th anniversary of the diocese of Exeter.

The dean of the Court of Arches, on an appeal from the Chelmsford consistory court, ruled that diocesan chancellors have discretion to sanction the use of more than two candlesticks on the altar. The Church of England Men's society, which had been revived under the chairmanship of the bishop of London (the Right Rev. J. W. C. Wand), went on pilgrimage to Canterbury: 3,000 members took part.

The archbishop of York, the Most Rev. Cyril Forster Garbett, baptized Princess Anne (Oct. 21) and presided at the Church house when Queen Mary re-opened the great hall which had been destroyed by enemy action (Nov. 13).

Convocation. Following upon the election of new members, parallel with the election of a new House of Commons, the customary loyal addresses to the King were sent by the convocations of Canterbury and York. Canon R. L. Whytehead was elected prolocutor of the Canterbury convocation with the archdeacon of Northampton, the Venerable Cecil John Grimes, and the Rev. C. E. Douglas as pro-prolocutors. At York Bishop B. Pollard was elected prolocutor and Canon E. T. Kerby and the archdeacon of Manchester, the Venerable Arthur Selwyn Bean, as deputy prolocutors. The main business of the upper and lower houses of both convocations throughout the year was the revision of the canon law. They dealt with the proposed new canons on Holy Communion, the bidding prayer, baptism, sponsors, catechizing, confirmation, marriage, visitation, the Communion and anointing of the sick, the burial of the dead, the registration of baptisms, confirmations, marriages and burials, divine service in unconsecrated buildings and private chapels and in the Latin tongue, resignation from holy orders, the consecration of bishops and the ordination of persons of illegitimate birth. An amended lectionary " for other Holy Days and Special Occasions " was approved. A report of the lower house of Canterbury on rural deans was considered by the upper house.

Both convocations received the report of the joint committee on the Church of South India. Resolutions included: a declaration expressing " the hope and prayer that a day may come when full communion between the Church of South India and the Church of England may be possible "; the postponement for five years of any decision on the consecration of bishops and the ordination of clergy in the Church of South India; the allowing of discretion to the diocesan bishops in England to permit bishops, priests and deacons of the Church of South India to preach in England and to permit those who were ordained as Anglicans to resume full status in the Church of England on returning to this country; permission for members of the Church of South India who were formerly communicant members of the Church of England to receive Communion here and for communicant members of the Church of South India to have occasioned communicant status when visiting England; and permission to members of the Church of England, clerical or lay, when visiting South India " to accept the hospitality of that Church " and to receive Holy Communion.

Church Assembly. The Bishops (Retirement) measure and the amendments to the Incumbents (Discipline) measure, 1947, and to the Diocesan Education Committee measure, 1943, received final approval; the Cathedrals (Appointed Commissions) measure received general approval. The Church Information board, constituted in 1948, was authorized to take over the functions of the Press and Publications board on April 1, 1950. The report of the House of Laity Continuation committee on the stipends of the clergy and that of the Council for Ecumenical Co-operation were received. The final report of the Commission for Reconstruction in Europe showed that the Church of England had contributed £165,000 of the £1,000,000 raised. A motion was carried urging " that steps should be taken to call men of mature years to serve in the sacred ministry after retirement from secular occupation."

The November session of the church assembly gave general approval to the Patronage measure, to the Ecclesiastical Delapidations (Amendment) measure and to the New Benefices (Stabilization of Incomes) measure. It agreed to ask the Central Council for the Training of the Ministry to report on steps to be taken to encourage the study of Latin, Greek and Hebrew by ordination candidates. The report of the Bishop of Derby and Dr. Micklem on *Church Relations in England, i.e.*, between the Anglican and Free Churches, suggesting the adaptation of episcopacy to the Free Churches, was published; also a weighty Report on Gambling. (*See* ANGLICAN COMMUNION; MISSIONS, FOREIGN RELIGIOUS.) (A. J. MAC.)

CHURCH OF SCOTLAND. During 1950 the Church of Scotland, with an increase of 4,892 in its communicant membership and an increase of £24,206 in its Christian liberality, continued to hold its place in the life and affairs of the Scottish people. The general assembly was held during the last week of May under the presidency of the moderator, the Right Rev. Hugh Watt, with Viscount Cunningham of Hyndhope as H.M. commissioner; and reflected, in the reports submitted to it and in its debates thereon, the church's interest in the varied problems, national and spiritual, before the public mind. Through the National Church Extension committee of the Home board, urgently needed hall-churches were being built all over the country to meet the requirements of the migrating population, while the board itself paid attention to such ventures as industrial chaplaincies and the arts and crafts centre in Edinburgh.

Circumstances necessitated the withdrawal of missionary staff from certain areas, e.g. Manchuria and Ichang, and steps had to be taken to restrict outlay on foreign missions to the sum of £331,000; but the drive to maintain adequate staff in 18 different spheres met with some success, the number of appointments being on the increase. The Jewish Mission committee was able to renew its work in Palestine, returning to its main medical and teaching centres; and the Israeli authorities helped it to send out many members of the staff. For work in Europe and in the Commonwealth the Church of Scotland continued to supply recruits to the daughter churches in the dominions and contributed during the year considerable sums for Christian reconstruction in Europe. The moderator of the general assembly of 1949, the Right Rev. George S. Duncan, personally conveyed the greetings of the church to the Lutheran and Reformed churches in Germany and to the Scottish people on the continent of Europe. Noteworthy progress was made by the Committee on Social Service, particularly in establishing and equipping eventide homes and homes for children and adolescents: no other voluntary organization in Scotland had so many homes for old people. The Woman's guild, which occupied a large and significant place in the life of the church, now had a membership of 146,905. Through its Church and Nation committee the church kept a vigilant eye on moral and social problems at home and abroad and evinced an alert interest in the proposed measure of devolution for Scotland. Oecumenical matters were increasingly before the mind of the Church of Scotland: a Scottish Churches Oecumenical committee was formed and conferences were held at Durham and Edinburgh between representatives of the Inter-Church Relations committee and representatives of the Church of England on the subjects of intercommunion and interchange of pulpits. During the year the general assembly had before it the report of the Special Committee on Re-Marriage of Divorced Persons; and an overture setting forth its proposals was discussed by the presbyteries. The financial maintenance of the ministry was actively and profitably advocated; and to augment the number of candidates for the ministry an appeal was issued to the church at large and to its various courts and organizations. (*See* also PRESBYTERIAN CHURCH.) (T. C.)

CIGARS AND CIGARETTES: *see* TOBACCO.

CINEMA. The uneasy economic situation which had developed in 1949 in many of the European film production industries tended to increase in 1950. The " gamble in public taste " which is the essence of " show business " depends on a reasonable chance that the backer of a new entertainment will see a profit on his investment; after World War II few private patrons were in a position to risk losing even a proportion of the large sums of money required to finance a film production. This situation gradually led to a position in Britain which became very clear in 1950: producers were forced to cut their costs considerably at a period when the level of costs in general was steadily rising. In Europe as a whole the element of " gambling in public taste," the wish to take a risk and produce something unusual, startling or artistically original, declined. The main tendency in France, Italy and Great Britain, which remained the most important production centres in western Europe, was to play safe both in choice of subject and in film technique. The year 1950 was perhaps one of the most conventional on record in the history of European film production.

Fewer film festivals were held in western Europe in 1950 than in 1949. The chief competitive festival for western Europe was held in Venice; that for eastern Europe in Karlovy Váry (Carlsbad), Czechoslovakia. The Venice festival lasted for a considerable time, with separate festivals for specialized documentary films, films on art and children's entertainment films; the French production *Justice est faite* won the Grand Prix. Meanwhile the countries of eastern Europe maintained their production of films, mainly of an ideological nature. Several congresses were held during the year, including that of the International Scientific Film association in Florence (where, earlier in the year, a congress on film music had taken place). The newly formed Federation of Film Clubs and Academies, representing the senior film-makers of a number of European countries and countries outside Europe, also met for the first time in Venice.

Great Britain. During 1949 a thorough investigation into the economic problems of the British film industry had been conducted by a number of government committees. In 1950 comparatively little was done to carry out the recommendations of these committees, partly through the failure of the three branches of the film industry (production, distribution and exhibition) to suggest a solution satisfactory to them all and partly through the general decline in the quality of British film production. The quota of 45%, fixed in 1948 by the president of the Board of Trade as the proportion of British films which almost all exhibitors had to show, had to be reduced to 40% for 1949-50 and to 30% for 1950-51. The exhibitors had long pressed for a reduction in the quota, claiming that it was impossible for them to obtain the necessary films without resorting to re-issues. The producers in general regarded each reduction of the quota as a moral defeat, since it had been mainly at their instigation that the original high quota had been fixed. It is true, however, that many producers preferred the lower quota and felt that British production should be developed in terms of quality rather than quantity, leaving the greater proportion of the programmes to be filled by U.S. productions. This emphasis on quality however did not meet the producers' main need, which still was to retrieve their costs in the home market. It became the aim in 1950 to produce as many films as possible for as little as £150,000 to £200,000 each, as compared with costs amounting to £250,000 to £500,000 in the period of too-arbitrary expansion during 1944-49, when it was hoped to capture the U.S. market for the British product by producing many so-called " prestige " films made at a cost much higher than the receipts from the home market alone. The producers laid the blame for the state of decline partly on their own previous over-development and over-costing, but mainly upon the excessive entertainments tax which took about fourpence out of every shilling paid by the public into the box-office, whereas the producer himself only earned about twopence. Thus a film which attracted over a million pounds into the cinemas would have earned scarcely £200,000 for its producer when its main period of exhibition came to an end.

Realizing the producers' difficulties, the government



A scene from "The Mudlark," the Royal Command film of 1950. Left to right, Queen Victoria (Irene Dunne), John Brown (Finlay Currie), Wheeler, the mudlark, (Andrew Ray) and Benjamin Disraeli (Alec Guinness).

increased its allocation to the Film Finance corporation during 1950 by £1 million and, further, announced later in the year a scheme known as the Eadie plan, through which another sum, estimated at more than £1·25 million, would be made available to producers during 1950-51 out of a fund formed by a special entertainment-tax remission. Grants from the Film Finance corporation to the end of 1950 could be made to independent producers ranging from the distinguished film-makers associated with Sir Alexander Korda's London Film Productions (including Carol Reed, Frank Launder, Sidney Gilliat and Michael Powell) to the humblest maker of low-grade films; in respect of the latter the policy met with considerable criticism and was gradually changed in order that greater emphasis should be placed on quality. Nevertheless, during 1950 the J. Arthur Rank organization, which had hitherto produced approximately half the country's output, reduced production to less than a quarter of its former scale; it also announced that it would cease production of the popular children's entertainment films and also of the successful series on current affairs called *This Modern Age*.

However, neither in documentary film production, which in Britain depended for its existence largely on direct subsidy from government and industrial sources, nor in feature film production was 1950 a poor year. Feature films included *The Blue Lamp*, *Chance of a Lifetime*, *Madeleine*, *The Magnet*, *Morning Departure*, *Odette*, *Seven Days to Noon*, *State Secret*, *Trio*, *The Wooden Horse* and *The Mudlark*, which was made in Britain by 20th century-Fox. At the Venice festival British documentaries, mainly on technical and scientific subjects, won six first awards.

Commonwealth. Apart from India, whose feature-film output remained very substantial, the distinctive work of the Commonwealth film industries (those of Canada, Australia and New Zealand in particular) was in the documentary field. The production schedule of Canada had been about 200 subjects a year; this work was carried out by the National Film Board of Canada, the purpose of whose work as defined by the National Film act was to use films and other visual aids "to help Canadians in one part of Canada understand the ways of living and the problems of Canadians in other parts" and to distribute these films abroad. The interest in documentary exhibition in Canada was very high: 250 voluntary film councils all over the country assisted in distribution and exhibition. Canadian films included *Challenge: Science against Cancer*, *Look to the Forest*, *A Friend at the Door* (social welfare in British Columbia) and the now well-known series of psychological case-films, the *Mental Mechanism* series.

In Australia the National Film board was kept intact when the Department of Information was disbanded by the newly elected Liberal government. With Stanley Hawes as producer in chief, typical subjects were *Flight Plan*, *Arnhem Land* (Stone-Age life in the far north), *A Pint of Milk* and *Know your Children*. In New Zealand the National Film unit produced from the end of World War II a weekly *Review* for the cinemas as well as a considerable output of documentary subjects. Other important film-producing organizations in the Commonwealth were the Malayan film unit, the film unit of the Ceylon government and the films division of the Indian Ministry of Information.

Czechoslovakia. The state production of films continued during 1950; output remained about 20 feature films a year. The aim of the industry, which was organized under the Ministry of Information, was to increase the production of feature films eventually to 50 subjects a year and to increase the production of short films and documentaries proportionately. Although Czech and Soviet films predominated in the cinemas, Czechoslovakia remained the best centre in the Communist *bloc* for the exhibition of films from western Europe. Czechoslovakian productions of note during 1948-49 included *The Case of Dr. Kovar*, a story set in a hospital in the prewar years and concerned with the struggle between two doctors, a Slovak comedy called *Katka*, in which a village girl leaves the traditional way of life of her people in order to work in a factory, and *The Great Chance*, a film about Czech youth and the construction of a railway. Two other notable films were a joint Soviet-Czech documentary production on colour called *New Czechoslovakia* and the first full-length film to be made by Jiři Trnka, the famous puppet-film maker, called *The Emperor's Nightingale*, based on the story by Hans Andersen.

France. The rate of production in France increased in 1949 to 100 feature films, by far the greatest part of the balance of the films screened being American productions "dubbed" into French by French actors and actresses. 1950 was an interesting if not an outstanding year for French production, but it was clear at the Venice festival that France was considered to be the country whose entries were generally on the highest artistic level. *Justice est faite*. directed by André Cayatte, won the Grand Prix. It was a well-presented composite drama which showed how a young woman doctor on trial for a "mercy-killing" was pronounced guilty by the jury because the peculiar individual circumstances of each of its members influenced the decision he had to make. Two films which caused rather more discussion than *Justice est faite* were Jean Cocteau's *Orphée* and Max Ophüls's *La Ronde*. *La Ronde* was also a composite film based on Arthur Schnitzler's famous story of the roundabout of love, half fantasy, half Viennese romance, interconnecting a number of characters in a chain of love-affairs which eventually make a complete circle. Ophüls (known in Hollywood as Opuls) gave this film with its galaxy of French stars a real sense of poetry and romantic sentiment. Cocteau's film was another of his modernizations of classical myths, in this case Orpheus's search for the lost Eurydice in the underworld. Orphée (played by Jean Marais) is a modern poet lured to a strange region of spiritual self-destruction by a woman representing death. Other French films of the year included: *La Cage aux filles* (with Danielle Delorme), a story with the background of juvenile delinquency; *La Marie du port* (with Jean Gabin), a love drama directed by Marcel Carné; *Un Homme marche dans la ville*, a strong melodrama of jealousy notable for its

background of the port of Le Havre and for the work of its actor-director Marcello Pagliero; *Dieu a besoin des hommes* (with Pierre Fresnay), a religious drama set on a Breton island; and *Ballerina*, a film of the ballet directed by Ludwig Berger. In the documentary field, *La Vie commence demain*, a full-length study by Nicole Védrès of contemporary life and thought in France, was the most ambitious production of the year.

Germany. German production developed steadily after World War II and amounted in 1949 to some 60 films. Among the German productions of 1949-50 was the fantasy *Der Rat der Götter*, directed by Kurt Maetzig, in which capitalism in Germany was attacked by making the gods directors of the board of a monopoly company. Gunther Neumann, the celebrated writer of *Berliner Ballade*, wrote the script of a new film called *Herrliche Zeiten* (Gorgeous Times), which surveyed the past 50 years of German history. Other films included: a modernized version of Wilhelm Hauff's fairy tale, *The Cold Heart; Nachtwache*, a religious film; and *Des Lebens Überfluss*, which dealt with the lives and problems of students in contemporary Germany.

Italy. In general Italy was the most happily placed of the important western European film-producing countries from the economic point of view. Its average production costs, though they rose by about 2% during the few years before 1950, were still less than half the average for British feature films. It was therefore comparatively easy for Italian producers to recoup their costs in the home market and to earn profits in the various outlets abroad for Italian films, which included America. There was a remission of tax on Italian productions of merit of up to about 18%, which also assisted producers, and 3% of the total box-office receipts of the programme in which it was placed went to each Italian documentary film which obtained commercial distribution. This greatly facilitated the production of artistic documentaries, though the returns to the producer varied considerably with the popularity of the feature film with which the particular documentary was paired for exhibition.

The outstanding Italian feature films of the year included: *Domenica d' Agosto* directed by Luciano Emmer (already well-known for his beautifully made documentaries on Italian art subjecst), a film about various representative groups of people on their Sunday-off at the seaside; *Prima Communione*, a comedy directed by Alessandro Blasetti on the domestic upheaval caused by the preparations for a " first communion "; and a series of important films with backgrounds which derived from Italy's contemporary social problems—*Il Mulatto* (the children of Negro soldiers in Italy), *Donne senza nome* (the lost women of Europe), *Il Cammino della speranza* (emigrants from southern Italy seeking a new life north of the Alps), *Cuore senza frontiere* (human problems in Trieste) and *Domani è troppo tardi* (the sexual education of adolescents). Other much-discussed films included *Stromboli* and *St. Francis*, both directed by Roberto Rossellini, and *Non c'è pace tra gli ulivi*, directed by Giuseppe de Santis.



Odette (Anna Neagle) and Captain Peter Churchill (Trevor Howard) in a scene from " Odette," produced and directed by Herbert Wilcox.

Scandinavia. The film industry in Sweden, the principal Scandinavian film-producing country, suffered considerably after the imposition in 1948 of an addition to the already heavy entertainment tax levy, which in 1950 reached a total of between 30% and 45% according to the price of the seats. Swedish films, like those of the other European countries, had to recover their costs in the home market; the fall in cinema attendances following the rise in seat-prices to meet the new tax led to a serious position for the producers. Sweden was producing between 30 and 40 films a year.

Among the more important films of 1949-50 was *Just a Mother*, directed by Alf Sjöberg who made *Frenzy*, *Thirst* and *Prison*, directed by Ingmar Bergman, and *Singoalla*, directed by the French film-maker Christian-Jaque in three language-versions.

U.S.S.R. The annual output of feature films by Soviet studios had never been large, though the development of regular production by many of the constituent republics of the Union in their own languages and to reflect their own ways of life added considerably to the number of films made in the Union as a whole Typical of these productions from more distant parts during 1950 was the Georgian film *Dzhurgaya's Shield*, a musical folk-tale of the region, which was awarded a special Stalin prize. Meanwhile, the chief studio of the Union, Mosfilm of Moscow, undertook a production in the Soviet far east with *Far from Moscow*, which was about the laying of an oil pipe-line in those parts during World War II; also the famous director Mark Donskoy made *Alitet goes to the Hills*, based on a novel about the early years of the Soviet government in the northern Chiskot peninsula, while K. Yudin made a film in colour about stud-farms in the Caucasus. Biographical films continued to be produced; *Popov* told the story of a Russian radio pioneer and *Zhukovsky* (in colour) dealt with the life of a famous 19th-century aircraft designer. Other films were of a more controversial nature; *Conspiracy of the Doomed* dealt with the exposure of a political conspiracy in one of the new satellite countries; *Secret Mission* showed how the western Allies attempted negotiation for a separate peace with Germany at the end of World War II; and *They have a Homeland* (directed by V. Gerasimov) dealt with the subject of Soviet children still in displaced persons' camps in the western zones of Germany.

Yugoslavia. Yugoslavia, conscious of her unique position as a Communist country outside the Soviet orbit, continued to develop her film industry at high pressure. The industry had only been founded in 1945, and technicians and artists alike had to be trained in film-making at the same time as they produced their films—feature and documentary—for the cinemas. Most films reflected the traditions, the recent history or the current developments of Yugoslavia. Recent films included: *Red Flower* (prisoners of war in German concentration camps); *The Magic Sword* (folk legend); *Trieste* (a contemporary political film); and *The Unconquered People* (the Yugoslav army).

Other Countries. Among other European countries producing films were Finland (annual production about 15 films), Greece (7 films), Hungary (24 films) and Spain (38 films).

(R. MAN.)

United States. The trade magazine *Variety* estimated that, despite the continuing box-office decline a 10% increase in the profits of the U.S. film industry had been made in 1950. Tabulations of nine companies pointed to profits of $34,722,422 as against $31,328,117 for comparable periods (in five instances twelve months, in four instances nine months) in their 1949 fiscal years. Six of the companies showed increases, three decreases. Opinions varied widely as to the box-office decrease from the 1949 takings of about $1,350 million. Many authorities estimated a falling-off of nearly 4%. After a rise in business co-incident with the start of the Korean war, the box office takings were reported to be falling considerably in the closing months of 1950.

Emphasis on economy in production continued, but studios were not averse to investing heavily in pictures considered worthy of exceptional expenditure. Location photography was especially stressed; a desire to make use of frozen funds in other countries was only partly responsible for this trend. Producers felt that to turn out the highest quality product, authentic location photography was in many cases essential. Illustrating this tendency was an advertisement of Metro-Goldwyn-Mayer proclaiming, " The Sun Never Sets on Leo, the M-G-M Lion ! ". It cited *King Solomon's Mines*, photographed in Africa; *Kim*, in India; *Pagan Love Song*, in Hawaii; and *Quo Vadis*, in Italy. The cost of *Quo Vadis*, largely filmed in Rome with thousands of extras and using both foreign-earned and U.S. currency, was expected to pass the $7 million mark. More than $3 million was spent by 20th Century-Fox on *Dawn of Decision*, photographed at Munich, Germany.

In October the U.S. government, in its concern for conserving essential defence materials, placed a ban on construction in the entertainment field. This included construction of new cinemas and set a limit of $5,000 on remodelling. Strong protests against the ruling were made by the industry, which cited the proved influence of films in strengthening wartime morale.

A new agreement was negotiated with Great Britain which was regarded as slightly more favourable to the U.S. industry. In contrast with previous years very few foreign pictures of any great import reached the United States.

There was decreasing emphasis on psychological, horror and gangster pictures in favour of productions aimed at entertaining the whole family. It was intended to regain the family trade, on which the structure of the motion picture industry had originally been built. This patronage had been largely lost, too many polls revealing that the bulk of attendance at cinemas was by 'teenagers and young couples. *Father of the Bride* started a trend toward family comedy. An unusual development was in the field of animal comedy, in *Francis*, centring around an army mule, and in *Harvey*, an invisible rabbit. *Destination Moon* and *Rocketship X-M* were the novelty pictures of the year, having for their theme journeys through space.

The outstanding pictures of 1950 were *All About Eve*, *Born Yesterday*, *Harvey*, *Broken Arrow*, *Caged*, *Cinderella*, *Cyrano de Bergerac*, *King Solomon's Mines*, *The Magnificent Yankee*, *Sunset Boulevard* and *Halls of Montezuma*. Gloria Swanson, glamour queen of two decades before, scored the greatest comeback in film history as the star of *Sunset Boulevard*, one of the most discussed pictures of the year. Among the players who rocketed to prominence were Howard Keel in *Annie Get Your Gun*, Mala Powers in *Cyrano de Bergerac*, Peggy Dow in *Harvey*, Jeff Chandler and Debra Paget in *Broken Arrow* and Nancy Olson in *Sunset Boulevard*.

The *Motion Picture Herald's* annual poll showed the following stars as the leading box office attractions in 1950: John Wayne, Bob Hope, Bing Crosby, Betty Grable, James Stewart, Abbott and Costello, Clifton Webb, Esther Williams,



The ugly sisters and their mother in a scene from Walt Disney's cartoon film of Cinderella.

Spencer Tracy and Randolph Scott. The New York film critics made the following selections for 1950: best picture of the year, Darryl Zanuck's *All About Eve;* best foreign-language picture, *Way of Love;* best actress, Bette Davis in *All About Eve;* best actor, Gregory Peck in *Twelve O'Clock High;* best director, Joseph Mankiewicz for *All About Eve.*

Among the awards for 1949 announced in March 1950 by the Academy of Motion Picture Arts and Sciences were the following: best picture, *All the King's Men* (a Robert Rossen production for Columbia); best actor, Broderick Crawford, in *All the King's Men*; actress, Olivia de Havilland in *The Heiress* (Paramount); supporting actor, Dean Jagger in *Twelve O'Clock High* (20th Century-Fox); supporting actress, Mercedes McCambridge in *All the King's Men;* best direction, Joseph L. Mankiewicz for *A Letter to Three Wives* (20th Century-Fox); best documentaries, short subjects, *A Chance to Live* (March of Time—20th Century-Fox, producer Richard de Rochemont) and *So Much for So Little* (Warner Bros. Cartoons, Inc., producer Edward Selzer); documentary feature, *Daybreak in Udi* (British Information Services, produced by Crown Film Unit); foreign-language film award, *The Bicycle Thief* (Italian). Among special awards were those to Fred Astaire for his unique artistry and his contributions to the technique of musical pictures; and to Cecil B. De Mille, distinguished motion picture pioneer, for 37 years of brilliant showmanship. The Academy statuette was awarded to the Eastman Kodak company for the development and introduction of an improved safety base motion picture film. (L. O. P.)

Educational Motion Pictures. Research was begun shortly after World War II on what precisely it is that makes films effective or ineffective for instructional purposes. Parallel research programmes were set up at the Pennsylvania State college and at Yale university. The basic research method involved the production of a series of experimental films. Different versions of films on a common subject were so produced as to control a number of variables. Thus, after testing these experimental film versions and variables on matched groups, it was shown that they could be quantitatively related to the amounts and kinds of learning which result from the film instruction alone.

The Instructional Film Research programme of the Pennsylvania State college under the direction of C. R. Carpenter was sponsored by the departments of the Navy and Army. Of the 50 research projects undertaken, 20 had been completed by the close of 1950. It was reasonably well established that some kinds of training could be accomplished by means of films without expert or even very competent instructors.

Genuine excitement had greeted the pioneer series of films on emotional development and treatment of emotional disorders—*Feeling of Rejection*, *Feeling of Hostility* and *Over-Dependency*, by the National Film Board of Canada. *Human Beginnings*, *Human Growth* and *Human Reproduction* stirred interest in the relationship of sex development to physical and emotional maturity and gave an unembarrassing "out there" experience which made communication about sex development of children and young people healthier and more intelligent. Films such as *The Quiet One*, *Preface to a Life*, *Problem Children* and *City of the Sick* were highly praised and widely distributed. (ED. D.)

Technical Developments. Theatres and Projection. There was a remarkable increase, particularly in the United States, in the construction of outdoor drive-in theatres. These theatres held as many as 1,800 cars and one in Chicago had four screens, each 50 ft. wide, so that the same picture was shown at the same time to four audiences from two different projectors in a centrally located booth. There was one loudspeaker for each car position and new types of speakers were developed to provide adequate sound quality and to stand up to continuous exposure to the weather. The problem of producing pictures bright enough to be seen from the last row of cars caused the introduction of larger projection lamps, methods for removing heat from the light beam and for cooling the film aperture, and also resulted in the introduction of new large-aperture projection lenses.

One notable development was made in Switzerland. It consisted of a carbon arc with the flame held in a fixed position by several streams of air blown around the incandescent crater. Light distribution was improved, and products of combustion which normally impair the performance of an arc lamp were either eliminated or blown away by the forced draught. From the same laboratory came a new arc lamp using a negative carbon in the form of either a disk or a ring, providing a much longer burning time than previously had been available.

A notable event was the first public showing of Cinerama, a U.S. development, which projected an enormous picture from three projectors at once. Sound, synchronized with the original picture, was reproduced from five loudspeakers, providing a remarkable directional characteristic and enhancing the spectator's illusion of observing the action through a very large picture-window.

Theatre Television. A new process developed in Switzerland and demonstrated during 1950 combined the advantages of the direct projection theatre television system, introduced in the United States by the Radio Corporation of America, and the film storage system, introduced by Paramount Television Productions, Inc. This was the Eidophor system, in which a supplementary carbon-arc source projected an instantaneous television picture that was traced by a conventional electron gun upon the surface of a viscous fluid which responded by variations in its thickness to an electrostatic charge. A combination of three electron guns was reported to be able to produce a projected television picture in full colour.

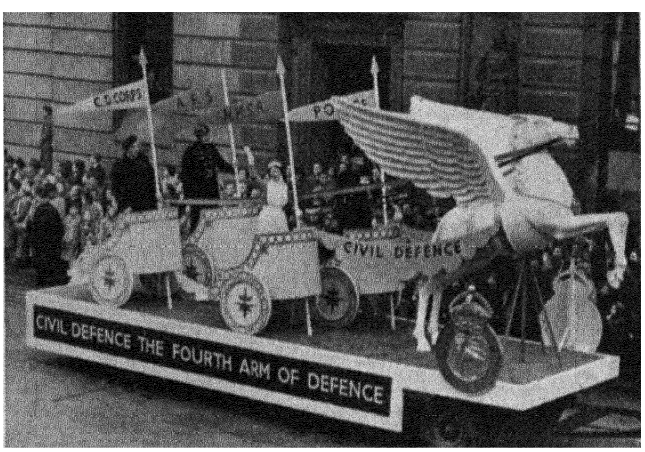
Sound Recording. Film-producing companies in all countries converted their original recording facilities from photographic to magnetic recording process. Some used quarter-inch tape, not perforated but synchronized with a perforated picture film through the use of a control frequency recorded as the original scene was being photographed. Other producers used 16-mm., 17·5-mm., and 35-mm. magnetic films. One U.S. manufacturer of magnetic recording materials introduced strip-coating in which a thin strip of magnetic material was applied to a conventional motion picture film either before or after the picture image was photographed, making magnetic sound available for release prints. A combination of magnetic and photographic tracks on the same film was being investigated as a practical means of providing stereophonic sound for conventional motion pictures at very low production cost. (B. NC.)

CIVIL AVIATION: *see* AVIATION, CIVIL.

CIVIL DEFENCE. The year 1950 marked a number of positive steps in the re-establishment of civil defence in the United Kingdom. Although the initial recruiting campaign for volunteers was begun at the end of 1949, it did not get into its stride until early 1950, since when the campaign pushed forward and included a special broadcast appeal by the prime minister. The total of volunteers had reached *c.* 50,000 by the end of the year.

The outline of the organization had already been given to the local authorities and the policy was to make a start in building up the local division of the Civil Defence corps. Local authorities were also asked to nominate heads of the six sections of the corps (five in Scotland); it was recommended, in particular, that outside London the chief constable should normally be responsible for the warden section. In the London area (defined for civil defence purposes as the metropolitan police district) responsibility was divided between the city and the metropolitan boroughs and the London County council, the former raising the headquarters, warden, pioneer and welfare sections and the latter the rescue and ambulance sections and some sub-sections of the pioneer and welfare sections. Counties wholly or partly in the London area were responsible for all six sections in the ordinary way.

The police, the fire service and the national hospital reserve were all linked with the civil defence recruiting campaign since they each formed a vital part of the overall defence system against hostile air attack. A notable event was the official opening of the civil defence staff college by the home secretary early in January. The staff college was located at Sunningdale park, Sunninghill, and was close to both the Army and Royal Air Force staff colleges. Courses were held throughout the year for senior officials of local authorities and also civil defence officers and others closely concerned with the planning and direction of the local civil defence divisions. They were attended also by a number of students from overseas: from Canada, Australia, Singapore, Malaya, Malta and Gibraltar within the Commonwealth; and from the United States and the Netherlands. At all courses representatives of the armed services, police, fire, W.V.S., St. John, Red Cross and St. Andrew's ambulance association were also included.



A civil defence tableau in the 1950 Lord Mayor's show in London.

The third of three technical schools was opened by the secretary of state for Scotland at Taymouth castle in Perthshire early in December. This school would serve especially Scotland, Northern Ireland and the north of England. Among other important matters local authorities were asked to earmark premises likely to be needed for civil defence purposes, to start preliminary investigations into the arrangements for the evacuation of priority classes and to set up local training centres, including the provision of a number of rescue training grounds. The training of volunteers went on steadily, especially the training of instructors, and by the end of the year upwards of 3,000 instructors were available.

An important announcement was made at the end of the year on shelter policy and the first steps initiated, which entailed a survey by local authorities of existing shelters and premises suitable for this purpose in accordance with certain prescribed standards. A number of important military civil defence exercises were held, including one covering London. A London civil defence regional skeleton staff was also set up, completing this organization for England and Wales. In Scotland no region was proposed. (J. HL.)

CIVIL LIST PENSIONS. Under the Civil List act, 1937, the amount allowed to be granted in any one year was raised from £1,250 to £2,500. In the year ended March 31, 1950, £800 of this was expended on new pensions and £1,700 on increases to earlier ones. In granting these pensions regard is paid to the financial circumstances of the recipients.

Only five new pensions were granted; to Mrs. Ruth Clark, widow of the Rev. Henry William Clark, in recognition of his services to theology, history, poetry and literature (£200); to Christopher Murray Grieve ("Hugh McDiarmid"), in recognition of his services to literature (£150); to Mrs. Grace MacIntyre, widow of John MacIntyre ("John Brandane"), in recognition of his services to literature (£100); to Ernst Julian Stern, in recognition of his services to dramatic art (£150); and to Huw Menai Williams, in recognition of his services to literature (£200).

CIVIL SERVICE. The record for 1950 contains nothing of special importance for the civil service in Great Britain. Under the Local Government act, 1948, the work of rating valuation passed in February from the local authorities to the Inland Revenue; and under the Commonwealth Telegraphs act, 1949, the post office in April finally took over the functions of Cable and Wireless, Ltd. in Britain. These new responsibilities added about 6,000 workers to the civil service, but the addition was more than offset by reductions elsewhere. As in the previous year, these reductions were most marked in those departments which could make relaxations in controls and rationing; thus the Ministry of Food, which abolished both the points system of food rationing and soap rationing, and the Ministry of Fuel and Power, which removed petrol rationing, together showed a reduction of nearly 10,000. Considerable reductions were likewise made elsewhere; and the total number of non-industrial staff employed in the civil service fell from 694,000 in Oct. 1949 to 675,400 in Oct. 1950.

In 1950 increasing use was made of committees of senior officials and persons of standing in business and other outside circles to review the organization of selected government departments. Three of these committees completed their task, five were still at work at the end of the year.

During the year normal competitions were held for entry to the main civil service classes. These included competitions for the executive class open to university graduates and to young men completing their compulsory national service; and special executive and clerical class competitions for men and women completing a regular engagement in the forces. Standing arrangements were also introduced for recruiting women between the ages of 15 and 60 to the established typing grades.

The process of establishing posts formerly regarded as temporary was continued. Thus 2,000 established posts in the basic executive grade were made available for competition amongst temporary executive staffs; and the Civil Service commission also undertook the selection of candidates from temporary clerical staffs to fill 19,000 posts in the established grade of clerical officer. A scheme was also introduced for according established status in the grade of clerical assistant to selected temporary clerks (men and women between the ages of 45 and 60) and to registered disabled clerks under 45.

The report made by Lord Chorley's committee in 1948 on the remuneration of the higher civil service (Cmd. 7655, H.M.S.O., London) had referred with approval to the review of the organization of the scientific and legal classes carried out in 1943 and 1944 by committees presided over by Sir Alan Barlow and had recommended that similar committees should be set up as soon as practicable to deal with other professional classes on the same lines. In pursuance of this recommendation a committee including a number of men eminent in the different professions concerned was set up in the course of the year under the chairmanship of Sir Thomas Gardiner to review the classes of engineers, architects, surveyors and other allied professions in the civil service. Similar committees were established under the chairmanship of Sir Harold Howitt to consider the classes of medical officers and accountants.

October saw the introduction of the scheme of better salaries for the senior posts in the service, which had been recommended by the Chorley committee in Sept. 1948 and accepted by the government early in 1949 (the original intention to introduce the scheme in Oct. 1949 had been abandoned because of the devaluation of the pound in the previous month). The improved salaries were recommended and accepted on grounds of the long-standing under-payment of senior civil servants but were not to become fully effective until Oct. 1951.

During the year rules were made under the Superannuation (Miscellaneous Provisions) act, 1948, to facilitate transfers between pensionable employments in the civil service and in local government, teaching or certain of the new public boards. These rules enable a person who has been transferred to or from the civil service to reckon his service in his first employment as if it had been rendered in the second. Service in both employments is aggregated, and a single superannuation award is payable. The authority accepting the liability to pay the pension covers itself for the proportion of pension attributable to the previous employment by a "transfer value" paid by the old to the new employer, representing the value of the transferred employee's accrued superannuation rights. (E. E. Bs.)

CLASSICAL STUDIES. The year 1950 showed quiet progress in several directions, notably in the production of important books and in the furthering of the objects of national and international associations. The International Federation of Classical Societies held its first general congress in Paris in August-September. There was a record attendance at the annual four-day meeting of the Classical association at Bristol, at which the presidential address was delivered by Hugh M. Last, principal of Brasenose college, Oxford, on "Ancient History and Modern Education." There was also a successful revival of the prewar practice of holding a one-day general meeting in the first week of January in London. Branches of the Classical association were formed at Cambridge (in succession to the Cambridge Classical society), at Bedford and at Stoke-on-Trent, bringing the total of local

branches to 26. Thirteen branches organized inter-school prize competitions in the reading of Latin and Greek aloud. The success of these competitions and their good work in inculcating an intelligent and accurate enunciation and appreciation of the sound of Latin led the Horatian and Virgil societies to offer special prizes for the reading of Horace and Virgil. The Orbilian society continued to produce *Acta Diurna*, its lively Latin newspaper for schools.

Two very fine monuments of scholarship and of admirable printing and lay-out came from the Oxford and Cambridge presses: E. Fraenkel's *Agamemnon* and A. S. F. Gow's *Theocritus*. Among other important books published since the last months of 1949 were: from the Clarendon press, G. Highet's *The Classical Tradition*, F. Jacoby's *Atthis*, G. M. A. Richter's *Archaic Greek Art* and A. J. R. Wace's *Mycenae;* from the Liverpool University press, S. F. Bonner's *Roman Declamation* and A. Y. Campbell's *Helena of Euripides;* from the Manchester University press, Miss K. M. T. Chrimes' *Ancient Sparta;* in London, W. K. C. Guthrie's *The Greeks and their Gods*, W. Beare's *The Roman Stage* and Miss K. Freeman's *Greek City States*. In the popular Penguin series (London) E. V. Rieu added a new translation of the *Iliad* to his *Odyssey* and *Eclogues*, while Robert Graves produced a spirited translation of *The Golden Ass* of Apuleius.

Continuations appeared in the Loeb classics (London): the fifth and last volume of *Dio Chrysostom* (H. L. Crosby), the seventh and last volume of *Dionysius of Halicarnassus* (E. Cary), the fifth of the twelve volumes of *Diodorus Siculus* (C. H. Oldfather) and the fifth of the ten volumes of *Pliny the Elder* (H. Rackham). The revived Teubner (Leipzig) announced new editions of the Greek Anthology, Bacchylides, Caesar, Catullus, Aesop, Horace, Menander, Pliny the Younger, Tacitus and of some works of Cicero, Plato, Plutarch, Ptolemy and Sallust. New parts of Pauly-Wissowa's *Real-Encyclopädie* and of Schwyzer's *Griechische Grammatik* (Munich) also became available.

Classical scholarship was sadly impoverished during the year by the deaths of P. N. Ure, W. H. D. Rouse, E. S. Forster, T. W. Allen, J. D. Denniston and M. P. Charlesworth. (L. J. D. R.)

CLOTHING INDUSTRY. The year 1950 was a most worrying one for the clothing industry. In all sections the problem was to incorporate the rise in cost of raw materials into the prices that could be got for manufactured garments. The price of crossbred wool from which medium-grade suits were made had increased by October to nearly nine times the prewar figure and was treble the price paid at the beginning of 1949. Both Egyptian and American cotton, used for shirts and sheets respectively, cost more than seven times the prewar figure. However, the rise in the sale of clothing which began after rationing ended in the United Kingdom in March 1949 continued during 1950. By September sales of women's apparel in the larger shops were higher by 29% over the year, and those of men's wear by 36%, the corresponding rises reported to the Board of Trade for smaller drapers and men's wear shops being 21% and 35% respectively. There was a rise of approximately 18% in the sale of footwear compared with the same period in the previous year.

Towards the end of the year prices began to rise more steeply as the raw materials bought, in many cases, at higher prices than ever before came into use, and the public showed a marked reluctance to spend. Retailers, in turn, hesitated to place forward orders of any appreciable size and even the clothes producers were wary of ordering large quantities of cloth at prices which would put the finished garments beyond the reach of the average purchaser. The whole trade was in a state of hesitancy as the year drew to a close.

To bring down clothing costs, many manufacturers began experimenting with mixtures of natural and synthetic fibres. Samples of mixture men's suitings, shirtings and underwear as well as overalls, hosiery, gloves and ties were put on show at an exhibition held in Manchester in November, but supplies were not expected to reach the shops in any quantity before the end of the year. It was anticipated that a man's ready-to-wear suit made from a mixture cloth containing 50% rayon and 50% wool would be more than £1 cheaper in the shops than a similar garment made from pure worsted.

Oppostion from the leading manufacturers to the government's order-in-council providing for the setting up of a development council for the industry came to a head in May, when the order was challenged in the High Court. The manufacturers sought a declaration that it was *ultra vires*. Mr. Justice Sellars dismissed the action, and the development council was formally set up. It commenced to collect a levy and various statistics from firms in the industry who were legally required to register with it. Apart from conforming to the legal obligations most of the organized manufacturers in the industry continued to withhold their support from the council, despite appeals from Board of Trade officials. Late in the year, David Donaldson Loweth, who had been associated with a clothing machinery firm, was appointed director and chief executive officer of the council.

The value of exports of apparel from the United Kingdom for the 10 months to Oct. 31 amounted to £28,554,005, as compared with £24,337,253 in the corresponding period in 1949 and £25,516,631 in 1948. The United States bought £2,628,533 worth, as compared with £1,346,496 in 1949; Canada £2,475,732 (£1,772,873); Sweden £2,469,270 (£1,052,126) and the Netherlands £915,925 (£532,293). Exports to Australia dropped from £4,043,138 in value in Jan.-Oct. 1949 to £2,973,085 in the same period in 1950. Other declines were: Union of South Africa £3,383,769 to £2,035,748; India £249,993 to £85,123; and Turkey £49,379 to £18,373. (R. J. My.)

United States. The year 1950 was one of variation in the clothing industry in the United States. Early in the year the trends of previous months were continued; retailers bought cautiously, inventories were held low and factories caught up on their backlogs and cut production. Essentially it was a buyers' market. Military action in Korea, followed by large federal government orders, completely changed the economic picture in midyear. Prices of raw and finished materials rose substantially. Increased consumer purchases, partly caused by a fear of future shortages, created a demand for raw materials. The end of the year saw "voluntary" price freezes that were not observed because manufacturers, stocked with high-price materials, were unable and unwilling to hold to sales price levels which had been based on lower-cost materials. Wage increases in the industry amounted to approximately 8%.

The increased use of synthetics continued. Primarily because of price, more rayon and nylon took the place of wool in men's apparel. The world-wide wool shortage accelerated this movement. The demand for cotton goods was greater at the end of the year than it had ever been. New finishes and weaves appeared, and linen and linenlike fabrics enjoyed popularity.

Machinery manufacturers offered newly perfected machines to make better garments faster. Increased industrial effort was reflected in large equipment purchases by apparel manufacturers. Facing manpower and material shortages, garment factories made heavy investments in new machinery. Backlogs appeared at some machinery supply houses, but suppliers were generally meeting the demand. New developments in self-sharpening cloth cutters appeared. A variety of straight and special sewing machines featured high-speed operation; a new, fast, needle-feed sewer was about to be

marketed as the year closed. Cloth-spreading and power trimming refinements were developed. A new blind-stitch tacking machine was offered in August. Hydraulic pocket slitters, knit-wear seamers and two needle felling machines appeared in new models.

There were no drastic style changes in men's dress. Shirts had the short wide-apart collar tabs of 15 years before. Ties continued along a more conservative trend. The use of colour in men's wear increased little, if any; plaids were featured. Suit coats and topcoats stressed square, wide shoulders, with raised sleeve heads and little suppression at the waist, and sportswear followed the general clothing pattern. Work garments in the United States were becoming more specialized for particular trades—a throwback to older times. Research was continued toward making military garments more protective. Women's wear continued the advances previously made. The industry offered well-styled, low-priced cotton and synthetic garments. (*See* also TEXTILE INDUSTRY.) (S. L. S.)

COAL. During its first year of operation in 1947 the National Coal board accounts showed a deficiency of £23,255,965 but during the succeeding years a real improvement took place. The surplus (profit) was £1,651,965 in 1948 and £9,466,813 in 1949. During 1949 £31 million were spent on capital account and during 1950 the new capital invested was between £30 million and £35 million. The production of deep mined coal in 1949 was 202·5 million tons and of opencast coal 12·5 million tons, a total of 215 million tons. For 1950 the totals were: deep mined coal 204·1 million tons and opencast 12·2 million tons, a total of 216·3 million tons (revised figures).

During the year 30 collieries were closed and the workers transferred to more profitable mines. The coal in some of the abandoned mines was exhausted and in others the remaining reserves could be more readily worked from neighbouring collieries. The general plan of the National Coal board during the succeeding 15 years was to reconstruct some 250 of the 950 mines in production in 1950. A score of new collieries were to be sunk, some 250 of the existing mines would continue without major reconstruction and some 350 to 400 would probably be abandoned.

When the coal mines were nationalized £165,200,000 was allocated for division among 21 coal mining districts as compensation. This was divided among the various districts but the subdivision of the allotted amounts between the

TABLE I. LABOUR PRODUCTIVITY IN COAL MINES IN GREAT BRITAIN

	1948	1949	1950
Face workers (totals)	293,000	296,000	289,000
All workers (totals)	724,000	719,000	698,000
Shifts worked (average per week)	4·93	4·67	4·70
Output (tons) per man-shift at face	2·92	3·02	3·10
" " " " (overall)	1·11	1·16	1·19

TABLE II. ALLOCATION OF CAPITAL EXPENDITURE 1950-65 BY DIVISIONS, PRODUCTION AND MANPOWER ESTIMATES FOR COAL MINES IN GREAT BRITAIN

Division	Output (Increase or decrease %)	Capital Expenditure (£ millions)	Manpower (Increase or decrease %)
Scottish	+29	64·3	— 7
Northern	+18	30·6	—18
Durham	+ 2	54·0	—26
North Eastern	+20	72·0	— 5
North Western	— 2	33·0	—22
East Midlands	+21	79·0	— 7
West Midlands	+ 9	41·7	—10
South Western	+35	102·7	— 5
South Eastern	+56	9·0	+27

TABLE III. MONTHLY RATE OF DELIVERY OF MACHINERY TO COAL MINES IN GREAT BRITAIN

	1948	1949	1950
Coal cutters	78	64	50
Power loaders	10	8	7
Conveyors	299	245	200
Underground locomotives	6	6	2



The Samson stripper at Wyndham colliery, Glamorganshire. This new machine, first used in 1950, employed hydraulic power to force the coal from the face. On the left hydraulic pitprops can be seen.

TABLE IV. WORLD PRODUCTION OF HARD AND BROWN COAL
(Thousands of metric tons)

	1945	1946	1947	1948	1949
Belgium	15,833	22,852	24,436	26,691	27,845
Czechoslovakia	27,072	33,642	38,578	41,335	43,529
France	35,017	49,289	47,309	45,129	53,044
Saar	3,468	7,886	10,485	12,567	14,262
Germany, Western	60,951	106,851	131,261	153,269	177,083
Great Britain	185,717	193,132	200,632	212,789	218,608
Hungary	4,285	6,352	8,809	10,598	11,816
Italy	1,525	2,699	3,218	1,880	1,936
Netherlands	5,226	8,792	10,513	11,325	11,907
Poland	27,406	48,742	63,939	75,325	78,732
Spain	11,977	12,021	11,764	11,822	11,949
U.S.S.R.	146,000*	161,000*	175,000*	201,000*	226,000*
China	16,576*	11,475*	14,148*	8,720*	16,000*
India	29,319	29,349	30,000	30,301	31,962
South Africa	23,554	23,602	23,498	24,024	25,437
Australia	18,531	19,905	21,295	21,820	21,785
Canada	14,975	16,159	14,396	16,737	17,345
United States	573,841	539,257	623,974	595,410	435,966

* Estimate.

companies in each district had not been completed by the end of 1950. As was to be expected it was causing much heart-burning.

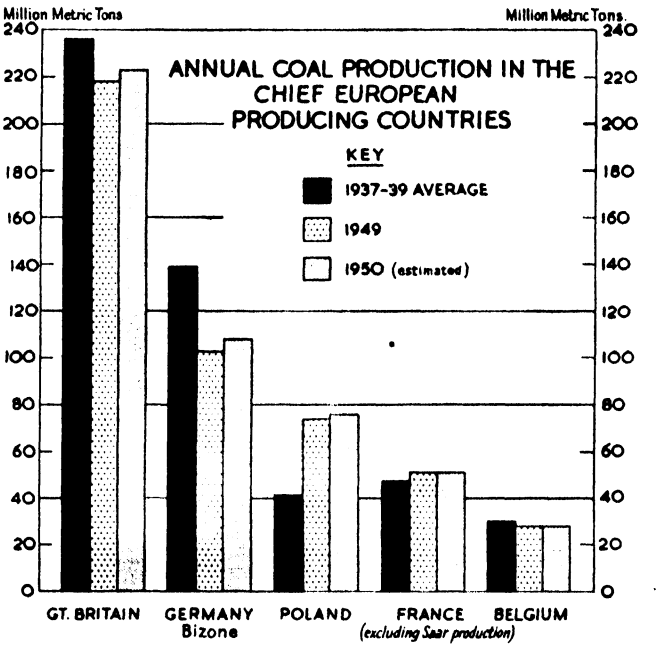
Prices. Pithead prices during 1950 did not alter much. There were minor adjustments depending on the quality and demand for particular coals. During the summer the internal consumer was tempted to stock up by a reduction in price. Unfortunately, this reduction was offset by an increase in railway freights of 16⅔%.

Plan for Coal. In November the board announced its long awaited " Plan for Coal." This envisaged the expenditure between 1950 and 1965 of some £635 million of which £115 million would be spent on ancilliary plants such as coke-ovens. The balance of £520 million was to be spent on new mines and on modernizing existing ones with the hope of producing 240 million tons of coal a year by 80,000 fewer workers than were employed in 1950. Much of this money would be provided by the board's depreciation funds but it was expected that about a quarter would have to be borrowed. The expenditure on new mines and modernization was being phased as follows: 1950, £30 million; 1951-55, £190 million (annual average £38 million); 1956-60, £160 million (annual average £32 million); 1961-65, £140 million (annual average £28 million.

Mechanization. Progress in mechanization was maintained. By the end of 1950 75% of coal was being undercut by machines and 75% loaded on to conveyors. The ordinary coal cutter could be used on only one of three 7½-hr. " cycles " in the 24 hours. Attempts were being made to overcome this " cyclic " mining and to develop " continuous " mining.

The weakest point in ordinary mechanized mining was the loading of the broken coal on to a conveyor belt with a hand shovel. The Meco-Moore cutter-loader of which over 50 were in use overcame the hand loading problem but the " cyclic " problem remained. Other machines like the Samson Stripper and the Gloster Getter were being tried and showed considerable promise. If successful they would allow continuous mining to be carried out thus utilizing costly machinery throughout the 24 hours. Coal cutters fitted with curved jibs were being tried and promised well. They produced larger coal and materially reduced the amount of shot-firing.

Accidents. The number of fatal accidents in British mines was remarkably low, being 460 in 1949 out of 720,000 employees. The figure for 1950 would have been of the same order had there not been two serious accidents. At Knockshinnock, in Ayrshire, a steeply rising road appeared to have been driven too close to the surface which consisted of moss, boulder clay and shale. Excessive rains turned this overburden into a viscous mass and it burst through into the heading. The liquid mud blocked the usual outlets to the surface but 116



men were rescued by driving a short tunnel through a barrier between Knockshinnock and a recently abandoned mine. A portion of the road to safety contained foul air and the rescued men were conducted through it wearing self-contained oxygen breathing apparatus. Thirteen men were killed. A more serious disaster occurred at Cresswell, near Worksop, Derbyshire, where 80 men lost their lives due to a trunk belt conveyor catching fire.

Wages. During 1950 wages remained relatively stable for skilled underground workers. In October, however, the day wage men and boys received a substantial increase involving an annual increase in the wages bill of some £4 million. The average of the earnings of all mine workers, with allowances, was £9 a week.

TABLE V. WORLD PRODUCTION OF HARD COAL
(Thousands of metric tons)

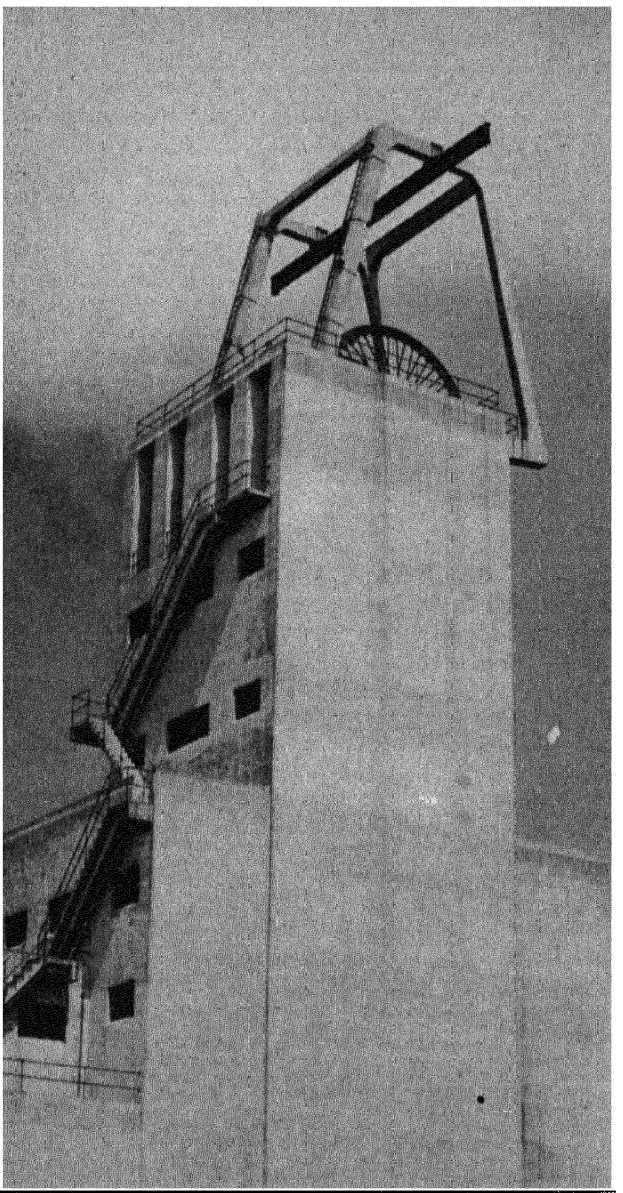
	1948	1949	1950 est.
Australia	15,048	14,328	15,896
Austria	180	180	180
Belgium	26,676	27,852	28,358
Canada	15,288	15,636	15,666
Czechoslovakia	17,746	17,003	17,849
France	43,296	51,204	51,888
Saar	12,564	14,256	15,058
Germany, Western	87,036	103,236	107,640
Great Britain	212,796	218,604	216,320*
Ireland, Republic of	180	120	168
Italy	972	1,104	1,086
Netherlands	11,028	11,700	12,202
Norway (Spitsbergen)	437	455	390
Poland	70,260	74,112	76,526
Portugal	386	443	420†
Spain	10,416	10,644	10,992
South Africa	24,024	25,440	25,586
Sweden	—	209†	201
Turkey	4,020	4,183	4,362
United States (bituminous)	541,074	394,502	430,214‡
" " (anthracite)	51,836	38,739	38,086‡
Yugoslavia	—	1,275	1,169

* Revised figure. † Low grade fuel; hard coal equivalent. ‡ To Dec. 9, actual; bituminous total includes lignite.

TABLE VI. COAL PRODUCTION IN THE UNITED STATES
(Thousands of metric tons)

	1946	1947	1948	1949	1950*
Bituminous	481,946	569,485	541,074	394,502†	430,214
Lignite	2,420	2,607	2,500	2,725†	
Anthracite	54,891	51,882	51,836	38,739	38,086
Total	539,257	623,974	595,410	435,966	468,300

* To Dec. 9. † Provisional.



The new pithead gear at the Mosley Common colliery, Lancashire.

Manpower. This was the most serious problem confronting the National Coal board. The Direction of Labour regulations were withdrawn from the mining industry in Jan. 1950 but no abnormal outflow followed. The intake remained fairly constant but did not compensate for the wastage while absenteeism was still high in 1950 as can be seen from Table VIII.

The reason for the decline in manpower was difficult to understand. Miner's wages and hours of work compared favourably with any other industry's. Conditions had greatly improved and much, if not all, heavy labour had been eliminated. Such reasons as lack of houses within a reasonable distance of the mines and the desire for a black-coated job had been suggested but neither of these completed the picture. It might be a natural swing of the pendulum from the bad conditions of 100 years ago when miners lived in isolated villages and only at weekends came to the towns to spend their money. Not unnaturally more sophisticated town workers ostracized them and this memory remained among the miners who encouraged their families to seek other work. The sterling character of the miner then, as sometimes later, was not appreciated.

TABLE VII. IMPORTS OF HARD COAL
(Thousands of metric tons)

Importing Country	Period	Exporting Countries: Great Britain	United States	Germany	Poland	Total incl. other sources
Belgium	1948	96	960	1,200	348	2,604
	1949	132	3	732	60	927
	1950 Jan.-Aug.	228	—	382	67	677
Denmark	1948	828	72	132	1,692	2,724
	1949	1,632	—	24	1,440	3,096
	1950 Jan.-July	2,184	—	169	1,575	3,928
France	1948	708	8,928	4,452	1,692	15,780
	1949	1,512	4,524	6,936	1,968	14,940
	1950 Jan.-Sept.	1,313	51	7,789	702	9,855
Italy	1948	588	5,064	1,440	876	7,968
	1949	984	3,612	1,680	1,584	7,860
	1950 Jan.-June	2,152	456	2,856	1,236	6,700
Netherlands	1948	588	816	1,452	444	3,300
	1949	900	381	1,608	912	3,801
	1950 Jan.-Aug.	999	—	2,919	180	4,098
Sweden	1948	1,140	648	—	3,420	5,208
	1949	1,296	396	60	2,172	3,924
	1950 Jan.-June	1,506	198	666	1,938	4,308
Argentina	1948	864	840	—	—	1,704
	1949	1,009	39	—	—	1,048
	1950 Jan.-Sept.	1,013	—	—	81	1,094
Canada	1948	144	27,864	—	—	28,008
	1949	324	20,052	—	—	20,376
	1950 Jan.-June	348	22,536	—	—	22,884

TABLE VIII. WAGE EARNERS IN MINING IN GREAT BRITAIN, SHOWING ABSENTEEISM RATE, RECRUITMENT AND WASTAGE

Year	Total employed	Absenteeism: Percentage of face workers	Absenteeism: Percentage of all workers	Recruitment	Wastage
1938	781,672	—	6·44	—	—
1945	708,905	19·12	16·31	48,668	66,019
1946	696,660	19·32	15·95	72,820	77,018
1947	711,380	15·05	12·43	94,190	68,025
1948	724,030	14·13	11·55	73,678	65,927
1949	719,527	14·94	12·34	52,119	68,516
1950 (est.)	690,000	14·75	12·00	50,000	75,000

Attempts were made in 1950 to obtain additional workers from Ireland but continental miners were not encouraged. The National Union of Mineworkers had not, up to the end of 1950, agreed to the suggestion that 15,000 skilled Italian miners should be brought to Britain, although a number of displaced persons, mostly Poles, were already working amicably with the British miners. It appeared that it might become inevitable as in France and the U.S. that foreign labour should be accepted if the output necessary for British industrial and domestic uses was to be obtained.

Stocks. The British coal mining industry at the end of 1950 was drawing on its stocks to the extent of a million tons a week. A long bout of bad weather in combination with the Christmas holiday period had caused this serious drain. The importation of coal into Britain from the U.S. or any country went against the grain but until more men entered the mines, until absenteeism decreased and until the long-term programme of reorganization costing some £600 million was completed, it was seen that Britain would be on the verge of a coal crisis every winter. British industry was increasing its demands and, in spite of great improvements in the use of coal, demand continued to grow faster than output.

Commonwealth. Queensland and Victoria, Australia, were developing their resources; so were the Rhodesias. Some engineers thought the future of the Union of South Africa depended on her coal rather than her gold. (J. A. S. R.)

COCHIN-CHINA: *see* INDO-CHINA.

COCOA. British West Africa was easily the world's chief producer of cocoa, the crop for 1949-50 being 248,000 tons in the Gold Coast and 98,000 tons in Nigeria, as against 278,000 tons and 109,000 tons respectively in 1948-49; for 1950-51 the crops in both territories were forecast at slightly above that of the preceding season. Production in both

territories was thus now a little below the average of the years immediate before World War II, and the spread of swollen shoot disease continued to threaten both the whole of the Gold Coast economy and the world's cocoa supplies. Destruction of infected trees, which offered the only known means of halting the disease, was made compulsory in the Gold Coast in 1950 and thanks to intensive propaganda and increased compensation payments met with greater co-operation on the part of growers. All cocoa in the two colonies was purchased by the Gold Coast Cocoa Marketing board and the Nigeria Cocoa Marketing board. The prices paid by the two boards declined in 1949-50 to £84 a ton in the Gold Coast and £100 in Nigeria, as against about £120 a ton in both territories in 1948-49; for 1950-51, however, the price of cocoa was raised sharply to £130 13*s.* 4*d.* in the Gold Coast and to £120 in Nigeria. At the same time prices of Accra cocoa in the New York market rose sharply in the second half of 1950 from a minimum of 23 cents a pound in March to 42 cents in September, as compared with 20 cents a pound in Sept. 1949.

Outside the British Commonwealth, Brazil's crop reached the record figure of 158,000 tons in 1949-50 and was forecast at 134,000 tons for 1950-51 as compared with 123,000 tons in 1948-49. French West Africa and the Cameroons together in 1949-50 provided a further 100,000 tons.

British West Africa's cocoa exports were particularly important as a dollar-earner, being second only to Malayan rubber in this respect. In 1949-50 exports from the Gold Coast reached 251,900 tons and from Nigeria 105,500 tons as against 243,300 and 107,200 tons respectively in the previous season. Brazil's exports in the first six months of 1950 amounted to 62,600 tons, while those from the Dominican republic in the year 1950 were 25,400 tons. Imports into the United States, the world's chief consumer of cocoa, in the first eight months of 1950 amounted to 223,300 tons as against 208,200 tons in the full year 1949. The United Kingdom took 130,000 and 147,000 tons in 1950 and 1949 respectively; the Ministry of Food remained the sole importer until Oct. 31, 1950, after which date private traders became free to import cocoa under an open general licence. (E. O. G.)

COCTEAU, JEAN, French man of letters (b. Maisons-Laffitte, nr. Paris, July 5, 1891), son of a family of Parisian lawyers, began to publish poems at the age of 17, under the influence of Edmond Rostand, Catulle Mendès and Mme. de Noailles, but considered his first important work to be his prose fantasy *Le Potomak*, written "when he began to dream"; interrupted by World War I, in which he flew with the aviator Roland Garros, it was published in 1919. From that time Cocteau contributed, by his expressive imagination, fantasy and wit, to every important contemporary movement, including Surrealism and for a time the Catholic revival under Jacques Maritain's influence; and not only in literature but in the graphic arts (he is a capable draughtsman), the theatre and the cinema. His patronage of youthful talent was also untiring; Raymond Radiguet was perhaps his most notable discovery. Cocteau's many works include the ballets *Parade* (1917, music by Erik Satie), *Le Boeuf sur le toit* (1920, jazz music) and *Les Mariés de la tour Eiffel* (1923, music by "Les Six"); in the theatre, *Orphée* (1927), *Oedipus Rex* (1928, opera-oratorio, music by Igor Stravinsky), *La Machine infernale* (1934), *Les Parents terribles* (1939); verse, *Poésie 1916-23;* novels, *Thomas l'Imposteur* (1923), *Le Grand Ecart* (1923), *Les Enfants terribles* (1939), *L'Aigle à deux têtes* (1946); critical and miscellaneous works, *Le Coq et l'arlequin* (1918), *Rappel à l'ordre* (1926), *Opium* (1930), *La Difficulté d'être* (1947, autobiographical reminiscences). Latterly Cocteau turned to the cinema and wrote and directed films of legendary beauty. Among them are *Le Sang du poète*, *L'Eternel Retour* (made during the German occupation), *La Belle et la bête* (1945), *L'Aigle à deux têtes* (1948) and *Orphée*, which was awarded the first prize at the international film festival at Venice in the summer of 1950. Also in 1950 he published *Maalesh*, a journal giving his impressions of Egypt, and wrote the libretto and designed costumes and decor for a ballet *Phèdre* (choreography, Serge Lifar; music, Georges Auric).

COFFEE. World exportable production of coffee in 1949-50 at 33·5 million cwt. was nearly 3 million cwt. below the estimate for 1948-49 and about 20% below the 1935-40 average. Latin America's output was estimated at 29·0 million cwt. as against 31·1 million in 1948-49 and a prewar average of 37·4 million. The main decline was in Brazil, which produced an average of 26·7 million cwt. in prewar years but only 16·9 million in 1949-50, while Indonesia also produced only a fraction of its prewar output. Expansion of output was most marked in Colombia (6·6 million cwt. in 1949-50 as against a prewar average of 4·8 million) and in the African colonial territories (4·2 million cwt. estimated, of which British East Africa provided about one-fifth). For 1950-51 the world exportable production was expected to show a further small decrease, both Brazilian and Colombian crops being smaller than in the previous season, although British East Africa's output was likely to be greater than in the two preceding seasons.

Total exports from Latin American countries (principally Brazil) in 1949 were about 35·0 million cwt. as against 32·5 million in 1948; about three-quarters of the quantity in both years went to the U.S. Total imports of coffee into the U.S. in 1949 amounted to 26·1 million cwt. as against 24·8 million in 1948; the prewar average annual import was about 15·5 million. Europe's imports in 1949 reached 9·9 million cwt., 1·4 million more than in 1948 but hardly above two-thirds of the immediate prewar average, dollar difficulties substantially restricting purchases from the Latin American countries. Imports into the United Kingdom in 1950 amounted to 798,000 cwt. as against 880,000 in 1949 and 401,000 in 1938; the Ministry of Food remained the sole buyers and British East Africa and Brazil were the chief sources of supply.

World supplies falling short of consumption, coffee prices continued high in 1950. Thus the monthly average price of Santos No. 4 in the New York market in the first half of 1950 remained at the high level reached in the later months of the preceding year (*i.e.*, between 45 and 50 cents a lb.) and in the second half rose to 56 cents a lb. in September as compared with 30 cents in the same month of 1949.

(E. O. G.)

COHEN, HARRIET, British concert pianist (b. London), studied under Tobias Matthay at the Royal Academy of Music, London, and under Ferruccio Busoni and Schendal. She gave her first recital at the Wigmore hall, London, in 1923 and made her concert debut under Sir Henry Wood in 1925. She subsequently appeared in all the principal European centres and in the U.S., the U.S.S.R. and Palestine. She soon established herself as a pianist of the highest distinction and was chosen to represent Great Britain at important international festivals at Salzburg, Frankfurt-Homburg, Chicago and elsewhere; she also played at the 1931 Paris exhibition and at the Disarmament conference, Geneva, 1932. In 1938 she was created C.B.E. In May 1948 Miss Cohen suffered a serious fall, severing an artery of her right wrist, and for a time it was thought that she would be unable to play again. On July 4, 1950, however, she returned to the concert platform at the Cheltenham festival, as soloist in a *Concertante for Orchestra and Piano (Left Hand)* which Sir Arnold Bax had

written to encourage her to return to her art; she gave a second performance of this work at a London Promenade concert later in the same month. Many composers, including E. J. Moeran (*see* OBITUARIES), Vaughan Williams and John Ireland, dedicated works to Miss Cohen, and just before his death Sir Edward Elgar had begun a concerto for her. She was also a pioneer in the revival of Elizabethan keyboard music and arranged the organ preludes of J. S. Bach for piano. Before World War II she published *Music's Handmaid* and during the war contributed the chapter on piano music to the Czechoslovak government's *Life of Dvořák*.

COKE: *see* GAS.

COLD, COMMON. The matter of greatest interest during 1950 concerning the common cold was the final settling of the question of its treatment and prevention with antihistaminic agents. Although an estimated $100 million was spent of these drugs during the year, successive reports of a number of investigators who tested their effects in controlled studies found them to be valueless for either the prevention or treatment of colds. Allergic rhinitis, which mimics the common cold, might be relieved with antihistaminic drugs. Similarly, it had not been established that there was value in treating colds with penicillin, aureomycin, chloramphenicol or terramycin; indeed, it was believed that harm might be done by their use. The suppression of the growth of some bacteria appears to permit other pathogenic bacteria and fungi to grow and cause disease. Furthermore, the oral administration of antibiotics is apt to sensitize persons to them so that untoward reaction may occur if antibiotic agents actually are needed and given later.

Among investigators of the common cold, W. J. Kerr still did not believe the disease to be a contagious one caused by a virus or spread by human contact. Physiologic mechanisms disturbed by cooling or other irritating factors presumably were blamed for the symptoms. However, according to C. H. Andrewes, director of studies at the National Institute for Medical Research, England, who was conducting extensive research on the subject, a virus causes the common cold, and A. L. Bloomfield held that no serious student of the common cold problem doubted that the essential cause was a filtrable virus. Several investigators had previously reported success in the cultivation of propagation of the virus of colds in artificial media, but Andrewes was not able to confirm the results, nor had he succeeded in transmitting the disease to a variety of small animals.

T. G. Ward's laboratory reported that a virus isolated from a patient with a cold was propagated in five transfers in the chick embryo. In several controlled studies, colds developed in 14 out of 23 volunteers in whom such cultures were instilled into the nose. No colds developed in 24 other volunteers to whom material not containing the virus was given. (*See* also EAR, NOSE AND THROAT, DISEASES OF).

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(H. A. RN.)

COLLECTIVIZATION: *see* PEASANT MOVEMENT.

COLLEGES: *see* UNIVERSITIES AND COLLEGES.

COLOMBIA. Republic situated in northwestern South America adjoining the isthmus of Panamá, Colombia is the only South American country with both Caribbean and Pacific coastlines. Area: 439,714 sq.mi. Pop.: (1938 census) 8,701,816; (mid-1950 est.) 11,015,000. Approximately 68% of the population is classified as mixed blood, 20% as white, 7% as Indian and 5% as Negro. Language: Spanish. Religion predominantly Roman Catholic. Chief towns (pop., 1947 est): Bogotá (cap., 482,480); Medellín (237,220); Barranquilla (225,430); Cali (147,160); Manizales (117,760); Cartagena (106,820). Presidents in 1950, Mariano Ospina Pérez and, from Aug. 7, Laureano Gómez Castro (*q.v.*).

History. The year 1950 marked a complete break from the traditional practices of minority representation in the national government and adherence to constitutional principles. A state of siege continued in force throughout the year; the congress remained prorogued; the Supreme Court remained ineffectual in judicial review; and control over presidential succession was changed from a congressional to an executive function. The Liberal party, which had virtually boycotted the presidential election in Nov. 1949, refused to recognize the legality of the Conservative administration of Gómez Castro and resorted to protest strikes in the capital and guerrilla warfare in the provinces. In May the announcement by President Ospina that the congress (scheduled to convene in July) would not meet during the year virtually eliminated Liberal party participation in the government. Liberal influence was further impaired by rigorous press censorship and by a renewed clerical campaign against secular education. Reports in the controlled press indicated that most of the guerrilla resistance was in the departments of Santander, Antioquia, Bolívar and Tolima. Casualties figured in the hundreds, and there was widespread emigration of noncombatants from one department to another to escape persecution.

Gómez succeeded Ospina as president on Aug. 7 and selected his cabinet exclusively from the Conservative party. In August, too, a national convention of Liberals pronounced the Gómez administration illegal and adopted a policy of non-collaboration. A manifesto written by Darío Echandía asserted that the party would abstain from the state and municipal elections of 1951, because it was being denied freedom of speech, press, assembly and movement; that constitutional guarantees had been suspended in 1949 solely to prevent a Liberal victory at the polls.

On the economic front, the government appointed a committee to study the report of the International Bank for Reconstruction and Development on Colombia's economy. The bank's report suggested a five-year, $2,500 million over-all development programme to promote and integrate the industrial and agricultural resources of the country. Pending completion of negotiations for the bank's loan, the government and private industry went ahead with its programme of borrowing to develop hydro-electric power, irrigation, highways, railways, pipe-lines and the petroleum, steel and rayon industries.

In foreign affairs, Colombia approved the United Nation's decision to intervene in Korea and offered the use of a 1,430-ton frigate together with unspecified general economic assistance. The dispute with Peru over Colombia's right to grant asylum to the outlawed political leader Víctor Raúl Haya de la Torre (sheltered by the Colombian embassy at Lima since Jan. 3, 1949) was given a ruling, on Nov. 20, by the International Court of Justice (*q.v.*). The decision, however, left undecided the question of whether Colombia was required to surrender the fugitive to the Peruvian government, and tension between the two countries continued.

A disastrous earthquake, occurring July 9-11 in the department of Santander, killed an estimated 400 persons, left about 40,000 homeless and caused several million dollars' worth of damage. Some small towns were totally destroyed.

Education. Schools (1947): primary 11,320, pupils 738,716, teachers 17,528; secondary and vocational 1,005, pupils 92,112, teachers 7,480; state universities 5, students 8,032, teaching staff 1,335.

Agriculture. Main crops (1949, '000 short tons): maize 709·5; potatoes 528; rice 143; wheat 132; barley 33. Production of coffee reached 6,140,000 bags (of 132 lb.).

Industry. Main products (1949): crude petroleum 29,722,406 bbl. (of 42 gal.); gold 359, 475 troy oz.; silver 106,678 oz.; platinum 19,739 oz.; salt 125,920 metric tons; cement 474,726 tons.

Foreign Trade. (Million U.S. dollars, 1949; 1948 in brackets) exports 337 (291·6); imports 282 (335). In 1949 the U.S. took 81% of the exports and supplied 69% of the imports. Coffee (5,410,000 bags) accounted for 74% of the export value in 1949; petroleum (about 22·8 million bbl.) 18%; bananas (about 6 million stems) 3%; gold (403,590 troy oz.) 3%. Approximately 86% of the imports were manufactured and semi-finished goods.

Transport and Communication. Railways (1948): 1,914 mi. Roads (1948): 11,166 mi. of improved highways. Licensed motor vehicles (Dec. 1948): cars 25,657, commercial 22,830. In 1949 the two major and eight minor air lines flew 14·8 million mi., carrying 797,184 passengers and 157,958 tons of cargo. In 1947 there were 62,414 telephones and about 200,000 wireless receiving sets.

Finance. (Million pesos) budget (1950 est.): balanced at 422·4. National debt (June 30, 1950): internal 361·6, external 147·3. Deposit money (June 30, 1950): 539·5. Currency circulation (June 30, 1950): 443·6. Monetary unit: *peso* with an official exchange rate of £1 = 5·46 pesos; in New York the official exchange rate was 51·02 U.S. cents per peso.

See International Bank for Reconstruction and Development, *Development Program for Colombia* (New York, 1950). (M. L. M.)

COMMERCE: *see* BUSINESS REVIEW; CHAMBERS OF COMMERCE; INTERNATIONAL TRADE.

COMMONS, HOUSE OF: *see* PARLIAMENT, HOUSES OF.

COMMONWEALTH OF NATIONS. Under this heading are grouped two articles and a table. The articles deal with the changes within the dominions and the independent republic of India under the sub-heading, for convenience, of " Dominions " and with changes in the non-self-governing and not fully self-governing territories, colonies, protectorates and trust and mandated territories, under the sub-heading " Colonies." The table gives essential data as at Dec. 31, 1950.

Dominions. At the invitation of the government of Ceylon a conference of the foreign ministers of the Commonwealth took place in Colombo from Jan. 9 to 15, 1950. The conference was notable for two reasons: it was the first conference of Commonwealth foreign ministers ever held and it was also the first Commonwealth conference held in an Asian dominion. D. S. Senanayake (*q.v.*) prime minister of Ceylon, who presided, said that the holding of the conference in Ceylon was practical proof that all members of the Commonwealth were of equal standing, irrespective of size, race or creed; and he thought it especially appropriate that Ceylon should be chosen for the first meeting of Commonwealth foreign ministers because, with the addition of its Asian members, the Commonwealth had acquired a new influence in Asia at a time when Asia was confronted with some of the gravest international problems of the day. Among delegates to the conference were P. C. Spender (*q.v.*, Australia), L. B. Pearson (Canada), F. W. Doidge (*q.v.*, New Zealand), Jawaharlal Nehru (*q.v.* India) and Ernest Bevin (*q.v.*) and Philip Noel-Baker (United Kingdom).

The official statement issued at the end of the conference was couched in characteristically general terms. It said that the discussion had " once again demonstrated that among all members of the Commonwealth there is a continuing and substantial community of outlook " in their approach to world problems; that most of the time of the conference had been spent on a comprehensive review of southeast Asia where progress was recognized to depend mainly on the improvement of economic conditions; and that recommendations, including one for the establishment of a consultative committee, would be made to the Commonwealth governments. It was agreed that this committee, whose origin owed much to the initiative of P. C. Spender, should hold its first meeting in Australia. For the rest the conference disposed of a much-debated subject by recording their agreement that there need be no inconsistency between Britain's closer association with western Europe and the maintenance of her traditional links with the Commonwealth. The success of the conference was widely acclaimed, Jawaharlal Nehru describing it as a " remarkable and significant " event which at least " helps us to prevent things from going completely astray."

On Jan. 26 the republic of India was formally inaugurated and her new constitution came into full force. The proclamation announcing the birth of the new republic, which was read by India's last governor general, Chakravarti Rajagopalachari, declared that " on and from this the 26th day of Jan., 1950, India, that is Bharat, shall be a sovereign democratic republic." From that date, too, a republic became for the first time a full member of the Commonwealth.



A cartoon by Low in the " Evening Standard " (London) in Jan. 1950, after Great Britain, India and Pakistan had recognized Communist China while the other Commonwealth countries and the United States had not granted recognition.

In February an industrial mission from the United Kingdom arrived in Pakistan to explore how United Kingdom industrial and commercial interests might best contribute to the economic development of the dominion. Its arrival was generally welcomed and the mission did something to remove the feeling which many Pakistanis had that they were being neglected by their Commonwealth partners. On April 29 its prime minister, Liaquat Ali Khan, left on a goodwill mission to the U.S. and Canada of which the principal purpose was to help Americans " to discover Pakistan." On May 30 he addressed a joint meeting of the Canadian Houses of Parliament in the course of which he observed: " If the Commonwealth does nothing more than give the world a lead in establishing the brotherhood of man irrespective of race, creed or colour it will still have made a notable contribution to the cause of human welfare."

The governments of five Commonwealth countries, Australia, Ceylon, India, Pakistan and the United Kingdom, announced on March 24 the offer of a joint loan of £6 million to Burma, a former member of the Commonwealth, to assist in her economic recovery. From May 15 to May 19 the Commonwealth economic consultative committee on economic aid for southeast Asia set up by the Colombo conference met at Sydney under the chairmanship of P. C. Spender. It recommended that development of southeast Asia should proceed by progressive stages under a six-year plan which was to be drafted in the light of full statements of the economic situation and development programmes of each participating country and, supplementary to that, that a Commonwealth scheme of technical assistance costing £8 million over

Country	Area (sq.mi.) (approx.)	Population* (000's omitted)	Capital	Status	Rulers, Governors and Premiers
EUROPE					
Great Britain and Northern Ireland, United Kingdom of	94,205	49,919	London	kingdom	George VI, King Prime minister of Great Britain, C. R. Attlee Governor of Northern Ireland, Earl Granville Prime minister of Northern Ireland, Sir Basil Brooke
Channel Islands	75	104†	St. Helier St. Peter Port	part of the United Kingdom	Jersey: lieutenant governor, Sir Arthur Grasett Guernsey: lieutenant governor, Sir Philip Neame
Isle of Man	221	51	Douglas	part of the U.K.	Lieutenant governor, Sir Geoffrey Bromet
Gibraltar	2	25	Gibraltar	colony	Governor, Lt. Gen. Sir Kenneth Anderson
Malta	121	307§	Valletta	self-governing colony	Governor, Sir Gerald Creasy Prime minister, G. Borg Olivier
ASIA					
Aden (and Perim)	81	81**	—	colony	Governor, Sir Reginald Champion
Aden Protectorate	112,000	650 ‖	—	protectorate	
British Borneo:					
North Borneo (with Labuan)	29,540	331 ‖	Sandakan	colony	Governor, Sir Ralph Hone
Brunei	2,226	41¶	Brunei	protectorate	High Commissioner, A. F. Abell
Sarawak	50,000	546¶	Kuching	colony	Governor, A. F. Abell
Ceylon	25,332	7,500	Colombo	dominion	Governor general, Lord Soulbury Prime minister, Don Stephan Senanayake
Cyprus	3,572	450**	Nicosia	colony	Governor, Sir Andrew Wright
Hong Kong	391	2,250	Victoria	colony	Governor, Sir Alexander Grantham
India	1,220,099	347,340	New Delhi	republic	President, Rajendra Prasad Prime minister, Jawaharlal Nehru
Malaya:					
Federation of Malaya	50,850	5,159†	Kuala Lumpur	9 protected states and 2 British settlements	Commissioner general for S.E. Asia, Malcolm Macdonald High Commissioner for the federation, Sir Henry Lovell Goldsworthy Gurney
Singapore	220	941¶	Singapore	colony	Governor, Sir Franklin Gimson
Pakistan	337,524	75,000	Karachi	dominion	Governor general, Khwaja Nazimuddin Prime minister, Liaquat Ali Khan
AFRICA					
Anglo-Egyptian Sudan	967,500	7,547‡	Khartoum	condominium	Governor general, Sir Robert Howe
British South African Protectorates:					
Basutoland	11,716	560**	Maseru	colony	High Commissioner, Sir Evelyn Baring
Bechuanaland	275,000	245**	Mafeking	protectorate	
Swaziland	6,704	187**	Mbabane	protectorate	
Gambia	4,033	276†	Bathurst	colony	Governor, Percy Wyn Harris
Gold Coast (including British Togoland 13,041 sq.mi.)	91,690	4,501§	Accra	colony and protectorate (British Togoland: trust territory)	Governor, Sir Charles Arden-Clarke
Kenya	224,960	5,373§	Nairobi	colony and protectorate	Governor, Sir Philip Mitchell
Mauritius (and Dependencies)	807	452‖	Port Louis	colony	Governor, Sir Hilary Blood
Nigeria (including British Cameroons: 34,081 sq.mi.)	372,674	25,027†	Lagos	colony and protectorate (British Cameroons: trust territory)	Governor, Sir John Macpherson
Northern Rhodesia	284,745	1,679	Lusaka	protectorate	Governor, Sir Gilbert Rennie
Nyasaland	47,949	2,500	Zomba	protectorate	Governor, Sir Geoffrey Colby
St. Helena (with Ascension and Tristan da Cunha)	95	5**	Jamestown	colony	Governor, Sir George Joy
Seychelles	157	35¶	Victoria	colony	Governor, J. D. Bates
Sierra Leone	27,925	1,857¶	Freetown	colony and protectorate	Governor, Sir George Beresford-Stooke
Somaliland Protectorate	68,000	500†	Berbera	protectorate	Governor, Gerald Reece
Southern Rhodesia	150,333	2,085	Salisbury	self-governing colony	Governor, Sir John Noble Kennedy Prime minister, Sir Godfrey Huggins
South-West Africa	317,725	321††	Windhoek	mandated territory	Administrator, Colonel P. I. Hoogenhout
Tanganyika	362,688	7,412§	Dar-es-Salaam	trust territory	Governor, Sir Edward Francis Twining
Uganda	93,981	4,927§	Entebbe	protectorate	Governor, Sir John Hathorn Hall
Union of South Africa	472,550	12,320	Pretoria and Capetown	dominion	Governor general, Major G. B. van Zyl Prime minister, Daniel F. Malan
Zanzibar (and Pemba)	1,020	266§	Zanzibar	colony and protectorate	Resident, Sir Vincent Glenday
AMERICA					
Bahamas	4,403	77‡	Nassau	colony	Governor, Major Gen. R. A. R. Neville
Barbados	166	203‡	Bridgetown	colony	Governor, A. W. L. Savage
Bermuda	21	36‡	Hamilton	colony	Governor, Lt. Gen. Sir Alexander Hood
British Guiana	83,000	414‡	Georgetown	colony	Governor, Sir Charles Woolley
British Honduras	8,867	63‡	Belize	colony	Governor, Ronald Garvey
Canada	3,843,144	13,871	Ottawa	dominion	Governor general, Viscount Alexander of Tunis Prime minister, Louis Stephen St. Laurent
Falkland Islands	4,618	2	Port Stanley	colony	Governor, Sir Miles Clifford
Jamaica (and Dependencies)	4,670	1,402†	Kingston	colony	Governor, Sir John Huggins
Leeward Islands	422	110†	St. John	colony	Governor, K. W. Blackburne
Trinidad and Tobago	1,980	619†	Port of Spain	colony	Governor, Major Gen. Sir Hubert Rance
Windward Islands	821	278†	St. George's	colony	Governor, Sir Robert Arundell

Country	Area (sq. mi.) (approx.)	Population* (000's ommitted)	Capital	Status	Rulers, Governors and Premiers
AUSTRALASIA					
COMMONWEALTH OF AUSTRALIA	2,974,581	8,179	Canberra	dominion	Governor general, W. J. McKell Prime minister, Robert Gordon Menzies
FIJI	7,040	277‡	Suva	colony	Governor, Sir Leslie Brian Freeston
NEW GUINEA	93,000	688††	Port Moresby	trust territory (under Australia)	Administrator, Colonel J. K. Murray
NEW HEBRIDES	4,633	48‡	Vila	Franco-British condominium	British High Commissioner, Sir Leslie B. Freeston
NAURU	8	1	—	trust territory (under Australia)	Administrator, Robert Stanley Richards
NEW ZEALAND (and Dependencies)	103,939	1,922	Wellington	dominion	Governor general, Sir Bernard Freyburg Prime minister, Sidney George Holland
NORFOLK ISLAND	13	1	—	Australian dependency	Administrator, A. Wilson
PACIFIC ISLANDS (Solomon, Gilbert and Ellice, Tonga and Pitcairn Islands)	11,625	177‖	Suva	colonies and protectorate	High Commissioner, Sir Leslie B. Freeston
PAPUA	90,540	303††	Port Moresby	part of Australia	Administrator, Colonel J. K. Murray
WESTERN SAMOA	1,133	73‖	Apia	N.Z. trust territory	Administrator, G. R. Powles

* 1950 est. if not otherwise stated. † 1949 estimate. ‡ 1948 est. § 1948 census. ‖ 1947 est. ¶ 1947 census. ** 1946 census. †† 1941 est.

three years should be inaugurated. During September the committee met again in London when the six-year development plans prepared by India, Pakistan, Ceylon, Malaya, Singapore and North Borneo were considered. Published on Nov. 29 these plans contemplated a total expenditure of £1,868 million of which £1,084 would have to be provided from outside the territories concerned. The published statement did not attempt to define precisely how the finance was to be obtained but other Commonwealth governments, including especially that of the United Kingdom, gave prompt assurance of their intention to assist in working out these far-reaching plans for development through self-help and mutual aid.

Within a few months the Commonwealth lost two of its most distinguished elder statesmen through the deaths of W. L. Mackenzie King, former prime minister of Canada, on July 22 and General J. C. Smuts on Sept. 11. On Dec. 12 Peter Fraser, prime minister of New Zealand from 1940 to 1949, also died. (*See* OBITUARIES.)

The disputes between India and the Union of South Africa over the treatment of Indians in the Union and between India and Pakistan over Kashmir (*q.v.*) remained unresolved. Preliminary tripartite talks in February between South Africa, India and Pakistan, exploring the possibility of a conference between the three countries on the position of Asians in the Union had no fruitful sequel partly because the subsequent enactment of the Group Areas bill by the South African government prejudged, in the Indian view, the issue of any such conference. India was also a leading critic at the United Nations of South Africa's resolve, despite the terms of the advisory opinion given by the International Court of Justice on July 11, to associate South-West Africa more closely with the Union. Elections held in the territory on Aug. 30 resulted in a decisive victory for the Nationalists who captured all six seats.

In the second half of the year the Commonwealth countries were all preoccupied by the development of the Korean crisis. Its members warmly approved the resolution of the Security council of June 28 condemning the aggression of North Korea, and on July 5 C. R. Attlee, the United Kingdom prime minister, emphasized the " striking unity of view " displayed by its member nations. At an early stage in the fighting Australian land and air forces were in action while Canadian, Australian and New Zealand naval forces operated in Korean waters with units of the Royal Navy. Canada decided to enlist a Canadian Army special force for service in Korea or wherever the interests of the United Nations had to be defended. South Africa, further removed from the scene of conflict, decided to recruit and equip a fighter squadron for service in Korea. Throughout, India was particularly active at the United Nations in seeking to restrict the area of fighting. Jawaharlal Nehru complained that the western powers were too much disposed to make decisions affecting vast areas of Asia without understanding the real needs and mind of the people there. This desire to bring about an early peace was shared by all members of the Commonwealth but differences in attitude towards the Communist regime in China reflected a deeper difference of view about the possibility of reaching a lasting settlement with it.

In the meantime, despite this concentration of attention on the crisis in the Far East, the countries of the Commonwealth made it clear that they were aware that the critical area both for the Commonwealth and for the free world was in Europe. Statements, particularly by members of the Canadian government, indicating their firm intention not to allow or to encourage any weakening of the defences of the west in order to cope with the crisis in the east, were echoed throughout the Commonwealth, and C. R. Attlee's visit to Washington early in December was the occasion of a renewed demonstration of Commonwealth solidarity. (N. MGH.)

Colonies. The general election in the United Kingdom in February resulted in the defeat of the then secretary of state for the colonies, Arthur Creech Jones, and his parliamentary under secretary. The prime minister took the opportunity to make a complete change of personnel and appointed James Griffiths secretary of state, John Dugdale minister of state and J. F. Cook parliamentary under secretary. The new secretary of state visited Malaya in June and the minister of state visited British East Africa in September. Debates in parliament on colonial subjects showed an increasing desire on the part of both the major political parties to remove the colonies from the sphere of party controversy. Doubts were expressed on both sides of the House of Commons as to whether constitutional advances in the colonies were not progressing too rapidly and whether changes were not occurring too frequently; doubters had particularly in mind the new Gold Coast constitution. There were others who, bearing in mind the troubles at the Enugu colliery in Nigeria and the report of the Fitzgerald commission thereon, questioned whether the development of trade unions in the colonies was always proceeding on sound lines. But though there were differences of emphasis and criticisms of points of detail it may be said that there was general agreement both on the objectives of the United Kingdom's colonial policy and on the methods of carrying it out.

The colonies were not immune from the " cold war " and, indeed, in Malaya a very warm war was in progress. Elsewhere there were comparatively few signs that

Communism had any widespread attraction, but there were numerous indications that the Communists were anxious to harness and unify any currents of discontent among colonial peoples and that their attention was particularly devoted to students overseas.

The number of such students increased greatly during and after the war. In the United Kingdom and Eire there were at the end of 1949 no fewer than 1,371 private students and 864 assisted scholars from the African colonies alone; while the total of colonial students there was in the region of 4,000. Some years previously the Colonial Office had found it necessary to provide facilities for the accommodation, hospitality and general welfare of these students. At the beginning of 1950 these responsibilities, together with the running of students' halls of residence, were handed over to the British Council (*q.v.*) and an allocation of £425,000 under the Colonial Development vote was made as a contribution towards the cost over a period of five years. The British Council also expanded its activities in the colonies themselves, where its representatives were to be found in all but the smallest territories. There its task was to ensure that as the colonial peoples advanced on the road to self-government they were made fully aware of the British way of life and of British political and local government systems.

The necessity for keeping public opinion in the United Kingdom informed on colonial affairs continued to play an important part in the government's colonial programme, though not so prominently as in the previous year; and in an effort to stimulate both greater interest in, and greater knowledge of, the colonies a smaller edition of the exhibition "Focus on the Colonies," which had proved so popular in London, went on tour in the provinces. Among cities visited were Southampton, Bristol, Cardiff, Liverpool, Glasgow and Birmingham.

The government's development plans for the colonies began to get into their stride as the immediate postwar shortages of manpower and materials ceased to make themselves felt. So much was this the case that, speaking in the House of Commons in July, the secretary of state said: "Financial considerations are now becoming more of a limiting factor in colonial development than shortages of staff and equipment." To meet this new situation a bill was introduced to increase the £120 million available under the Colonial Development and Welfare act of 1945 to £140 million. The report on progress under the Colonial Development and Welfare acts for the year ended March 31, 1950, showed that approval had been given in that year to development and welfare schemes involving United Kingdom grants of £11,010,168 and loans of £555,114 and to research schemes for which the United Kingdom contribution would be £1,795,999. This brought the total sum approved under the 1940 and 1945 acts to £76,402,615. The actual payments in the year ended March 31, 1950, amounted to £12,902,511, just over double those of the previous year.

At the same time the Colonial Development corporation, having satisfactorily established its organization, was able to speed up the consideration of projects (schemes or proposals under consideration) and to increase the number of its undertakings. Its annual report for 1949 showed that by the end of that year 28 undertakings with an aggregate capital of £14,187,000 were in operation, while some 52 projects were in course of active planning and a further 66 were at an earlier stage of consideration. By Sept. 15, 1950, the number of undertakings had increased to 49, with an approved capital outlay of just under £30 million, and the number of projects which had reached the stage of active consideration had dropped to 28. These 49 undertakings were distributed over 22 different territories and ranged from a meat freezer in the Falkland islands to a cement factory in Northern Rhodesia, from hemp plantations in North Borneo to fruit estates in British Honduras.

The United Kingdom government continued to co-operate with other countries in the promotion of the interests of non-self-governing territories. The United Kingdom delegation to the fifth general assembly of the United Nations included Ratu Sir Lala Sukunu, secretary for Fijian affairs in the government of Fiji, as adviser on questions affecting non-self-governing territories. Colonial territories participated in a number of the activities of the functional and regional commissions of the Economic and Social council



The Commonwealth Speakers and Presiding Officers who attended the opening of the new House of Commons chamber on Oct. 26, 1950, from left to right: Back Row—P. Wyn Harris (Gambia), Sir John Macpherson (Nigeria), Sir Charles MacAndrew (deputy chairman, U.K.), Major James Milner (chairman of Ways and Means, U.K.), Sir Ambrose Sherwill (Guernsey), T. S. Page (Northern Rhodesia), A. R. W. Robertson (Trinidad and Tobago), Sir Hilary Blood (Mauritius), Sir Alexander Coutanche (Jersey), E. C. Quist (Gold Coast). Second Row—K. N. R. Husbands (Barbados), W. K. Horne (Kenya), Sir Henry Gurney (Malaya), C. C. Campbell (Jamaica), J. D. Qualtrough (Isle of Man), C. V. Wright (British Guiana), W. A. George (British Honduras), Sir Franklin Gimson (Singapore), Sir Norman Stronge (Northern Ireland), Asa H. Pritchard (Bahamas), J. W. Cox (Bermuda), T. A. Marryshow (Windward Islands). Front Row—Sir A. F. Molamure (Ceylon), G. V. Mavalankar (India), M. H. Oram (New Zealand), W. Ross Macdonald (Canada), Colonel Douglas Clifton Brown (U.K.), A. G. Cameron (Australia), J. F. T. Naudé (South Africa), Tamizuddin Khan (Pakistan), Sir Allan Welsh (Southern Rhodesia).

of the United Nations, though E.C.A.F.E. (Economic Commission for Asia and the Far East) was the only regional commission on which colonial territories were actually represented. Much of the work carried out by the specialized agencies of the United Nations was also of direct significance to the colonies, and the United Kingdom delegations frequently included representatives from the colonies such as those to the Food and Agriculture Organization conference on soil conservation, range management and forestry held in Cyprus in May, which was largely organized by the Cyprus government.

There was further progress, too, in the collaboration between the self-governing territories of Africa and those metropolitan countries responsible for the administration of colonial territories there. In January at an international conference in Paris it was agreed between Belgium, France, Portugal, Southern Rhodesia, the Union of South Africa and the United Kingdom to set up a commission for technical co-operation in Africa south of the Sahara. At a scientific conference in Johannesburg in October of the previous year it had been recommended that a Scientific Council for Africa south of the Sahara should also be created; this recommendation was endorsed by the Commission on Technical Co-operation. A meeting in May planned the details of the organization of this council, which held its first meeting in Nairobi in November. Other international conferences included one at Johannesburg in October to discuss the development and co-ordination of communications in southern and central Africa. (J. A. HU.)

COMMUNIST MOVEMENT. It was generally recognized by 1950 that the Communist movement in the world was a much more complicated affair than had often been realized and that much earlier discussion about the nature of "Communism" was irrelevant to it.

The Russian Core. It could be said that the Communist movement should properly be regarded as that movement which, under the leadership of the Politburo of the All-Union (viz., Soviet) Communist party, had as its ultimate professed objective the transformation of the entire world into a single Communist state or at least, as a prelude to this, into a quasi-federation of Communist states on the model of the U.S.S.R. itself. Since the Soviet Politburo also controlled the government of the U.S.S.R., it was often difficult to dissociate actions by the Soviet government from those more properly regarded as within the province of the Communist movement proper. But in 1950 there was little to fortify the beliefs often expressed that there was some kind of inherent conflict between the objectives of these two. For it was clearly the intention of the Russian core of the movement to retain undiluted that control over it which it had enforced on the morrow of the Russian revolution. For this reason it was necessary to continue to build up the strength of the Soviet Union as a great power and to continue its internal development on Communist lines—the Communist stage of this development being admittedly still in the future—and not to annex new territories to the central nucleus if there was any danger of their displacing the Muscovite centre of gravity. But this could hardly happen unless a great power in the strict sense, Germany for instance, were to become Communist. Only then would it be possible to see whether the recent tendencies to emphasize in the Soviet world the superiority of things Russian as well as things Soviet would lead to an attempt by the Russian leadership of world Communism to prevent any sharing of power by Communists of another nationality. And in 1950 such an eventuality appeared far distant.

The other problem of interpretation was that constituted by the picture of the international scene as presented in Soviet and Communist utterances, compared with the reality as known in the rest of the world. That picture showed the rest of the world in strict accordance with the expectations of Marxist-Leninist theory, as engaged under American leadership in preparing for an all-out onslaught against the U.S.S.R. and its regime. The proposed rearmament of Germany (which Communist propaganda alleged actually to have begun) and the alleged rearmament of Japan fitted neatly into this context. The Korean war was declared to be the beginning of overt aggression by the United States upon the Communist world. In the light of this, the continued heavy armaments maintained by the Soviet Union, the reported military preparations in the "satellite" countries, including Eastern Germany, and other Soviet and Communist actions could more or less plausibly be represented as necessary defensive measures at a time when it was held that genuine Soviet proposals for atomic disarmament and for the reduction of conventional armaments were being held up at the United Nations by the intransigence of the United States and of the governments associated with it in the North Atlantic treaty and other instruments of international co-operation in the west.

The question was whether these fears of western aggression were wholly or even partly genuine, or whether they were put out for the consumption of the masses while the leaders concerned themselves with planning for further moves in Communist expansion. Soviet and Communist action could be explained in either way, since at the "cold war" stage it was difficult to distinguish between offensive and defensive tactics. And even when (as in Korea) the "cold war" became undistinguishable from open warfare of the ordinary kind, it soon appeared that it was not the intention of the Soviet government (or if one prefers it, of the Communist movement) to throw into the balance the most powerful weapon of world Communism, the military might of the U.S.S.R. It appeared to be accepted that the interests of Communism and of the Soviet Union as its citadel did not in 1950 demand that the whole thing should be put to the hazard of World War III. Whether, as some people argued, this was because of the presumed inferiority of the Soviet Union in the means of waging atomic war was not a question that could easily be answered. Certainly nothing in Communist theory demanded an abstention from the use of force in pursuit of its objectives; on the other hand nothing in the past of the movement suggested that force would be resorted to lightheartedly or without a pronounced presumption of success.

The Soviet-Dominated Countries. But the answers to questions such as these were important for deciding upon measures to combat the advance of Communism—measures which formed an important part in the history of the movement in 1950. The division of the world from the point of view of the Communist and non-Communist countries was by no means a simple one. There was first of all the Soviet Union itself, the centre of the Communist movement and the model for development in the remainder of the Communist or Communist-dominated world. This latter consisted first of those European countries which had fallen under Communist domination as a result of World War II: Poland, Hungary, Rumania, Bulgaria, Albania and Czechoslovakia. In all these the process of sovietization was being carried forward at different speeds but along the same lines; in all of them the economic policy, the political police and increasingly the armed forces were being closely interlocked with the Soviet system. In any clash the Soviet Union could count upon mobilizing their full economic and human potential without obstruction. But the process of economic and social change had not got to the stage where they seemed

eligible for incorporation into the Soviet Union, if such indeed were the final objective. With this group belonged in many respects Eastern Germany also. But here the continued Soviet assertions that the ultimate objective was a united Germany made it impossible to regard the situation equivalent to that in the other satellite countries.

There were two other countries in Europe with special relationships to the Soviet Union but outside the group. One was Finland, where the Soviet government maintained on the whole correct relations with a non-Communist regime well within the orbit of its power and from which it continued to draw valuable economic benefits in the form of reparations. The other special case was that of Yugoslavia which, having set out as a satellite, had broken away as a result of its leaders' being unwilling to accept total subordination to Moscow and proclaimed itself a true adherent of the Marxist-Leninist standpoint threatened from without by the imperialism of the Soviet Union and its satellites of the Cominform.

The Cominform. The Information Bureau of the Communist and Workers' Parties founded on Sept. 22-23, 1947, at Wilcza Góra, Poland, with headquarters first at Belgrade and, since the recognition of Yugoslavia's deviation in the summer of 1948, at Bucharest, played little obvious part in the international Communist movement during 1950. It still seemed to represent not only the Communist parties of the Soviet Union and the people's democracies but also those of Italy and France and to provide a sounding board for Soviet pronouncements on ideological correctness and on foreign policy. Its publications were largely concerned with abusing the regime in Yugoslavia. On the edge of Cominform Europe, the military defeat of Communism in Greece had by no means put an end to its activity there.

Western Europe. France and Italy belonged to the next group of countries with which the Communist movement was concerned: those of western Europe, North America and Australia. But France and Italy differed from the other countries of the group in the size and character of their own Communist parties. In these two countries, although the membership of the parties was in decline (*see* Table I), there were few signs that it had lost its control over the bulk of the organized labour movement. In both the results of the war and of the postwar period had put the Communist parties in a good position to capture for themselves the main currents of economic and social discontent. They directed the principal organizations of the industrial working class and had particularly (and paradoxically in France) some considerable measure of rural support as well. In Italy the circumstances of the liberation had also given to Communists important points of vantage in the administration and the nationalized industries from which their ejection was not easy so long as the forms of democratic government had to be observed. But in fact Communist supporters existed in all walks of life and although the French Communist party professed a class doctrine it was not a class party.

The political situation in both France and Italy made it unlikely that Communist parties, although commanding so high a proportion of the electorate in both could obtain power by ordinary means. And it was obvious that their immediate value to the Soviet controllers of the movement (to whom their total allegiance was undoubted) lay largely in their ability to use their industrial strength for the direct obstruction and sabotage of western defence measures. Here however a certain weariness of industrial action for political purposes seemed to have become manifest in the course of the year, and the various attempts, for instance in France to prevent the unloading of U.S. arms or the dispatch of supplies to Indo-China, did not in their total effect amount to very much. On the other hand, the Communist "line" in foreign policy had two strong factors on its side in France: the unpopularity of the costly war in Indo-China and the reluctance to rearm Germany. Here Communists could threaten to capture some of the support that might otherwise go to the French Socialist party and thus help to bring about the collapse of that "third force" in French politics which seemed the only foundation upon which a governmental majority could be built. Some effort was made to counteract the appeal of Communism by its non-Gaullist opponents; and some important measures in the interests of national security were carried through, such as the dismissal of Jean-Frédéric Joliot, a Communist, from his position on the French side of atomic research. But the strength of the Communist appeal in France remained one of the great sources of uneasiness in the planning of western defence.

In the remaining countries of the group, Communism as a mass movement seemed to present little danger. The elections of Feb. 23 suggested that its direct political support in Great Britain was negligible. In these countries the threat from Communism seemed to come from three sides. In the first place, such Communist penetration as there was into trade unions, in Great Britain for instance, was qualitatively more important than its actual size suggested. Important Communist elements in the electrical trades or among technicians

TABLE I. COMMUNIST PARLIAMENTARY REPRESENTATION IN EUROPE*
(Figures in brackets are those of the preceding election)

	Date of last election	Votes obtained		% of total votes		Seats obtained by Communists		Total number of seats
Austria	Oct. 9, 1949	212,651	(174,237)	5·0	(4·0)	5	(4)	165
Belgium	June 4, 1950	234,325	(376,876)	4·7	(7·5)	7	(12)	212
Denmark	Sept. 5, 1950	94,495	(141,094)	4·6	(6·8)	7	(9)	149
Finland	July 1-2, 1948	—	—	—	—	38	(51)†	200
France‡	Nov. 10, 1946	5,475,955	(5,203,046)	28·2	(25·9)	168	(153)	619
Germany, Western	Aug. 14, 1949	1,360,443	—	5·6	—	15	—	402
Great Britain§	Feb. 23, 1950	91,815	(102,780)	0·3	(0·4)	0	(2)	625
Iceland	Oct. 23, 1949	14,077	—	19·5	—	9	(10)	52
Italy	April 18-19, 1948	8,025,990‖	—	30·7	—	132	—	574
Luxembourg	June 6, 1948	—	—	16·9	—	5	(5)	51
Netherlands	July 7, 1948	381,953	(502,963)	7·9	(10·6)	8	(10)	100
Norway	Oct. 10, 1949	101,666	(176,491)	5·8	(11·9)	0	(11)	150
Sweden	Sept. 19, 1948	241,812	(318,466)	6·4	(10·3)	9	(15)	230
Switzerland	Oct. 27, 1947	—	—	—	—	7	(1)	194

* Only European countries having a parliamentary system and free elections are included. Ireland and Greece are omitted: the former because there were no Communist candidates at the elections of 1943, 1944 and 1948; the latter because the Communists boycotted the election of 1946 and were not allowed to have candidates at that of March 5, 1950.

† Communists and fellow travellers elected under the banner of the Popular Democratic league.

‡ The membership of the French Communist party was estimated by the *Partiynaya Zhizn* (Moscow, Oct. 1947) at 1,000,000 and by the *Bolshevik* (Moscow, April 1950) at 786,855.

§ The membership of the British Communist party at the end of March 1949, according to a report of the party's excecutive committee published on Nov. 11, 1949, was 40,161, as compared with 38,579 in June 1947.

‖ This represents the number of votes obtained by the Democratic Popular front, that is, the Communists and the left-wing Socialists. Out of 183 deputies elected for the front 132 were Communists. Palmiro Togliatti announced on March 25, 1949, that the party membership was 1,896,634 as compared with the figure of 2,200,000 in July 1948.

could be regarded as unhealthy at a time of rearmament. In the second place, in view of the increased importance of highly technical factors in rearmament particularly on the atomic side, there was an obvious chance for isolated individuals to do much mischief through espionage or sabotage. The K. E. J. Fuchs and Bruno Pontecorvo cases in Great Britain drew attention to this particular feature of the problem. There was also the harm that could be done by Communist intellectuals, and still more by near-Communist intellectuals prepared to co-operate with them, in casting doubt upon the whole concept of a Communist menace and upon the wisdom of the measures being undertaken to resist it.

The " Peace Movement ". It was perhaps the Communist whose acceptance of Muscovite leadership had little to do with an inferior economic status—he was often of middle-class origin and way of life—and whose acceptance was probably to be explained by more personal frustrations or, in the case of scientists, by the desire for more power combined with a *naïveté* about the proper scope of political action, that presented the most serious and the most typical problem. It was this type of person that Communist propaganda set itself to exploit through the disingenuous Peace movement which produced a platform clearly of Soviet inspiration in the form of the so-called Stockholm peace appeal drawn up in March 1950 by the movement's permanent committee. The rest of the year was spent in using the collection of signatures for this appeal as a means of making pro-Soviet and anti-American propaganda.

This campaign was to culminate in a new congress of the movement at Sheffield in the middle of November. It became clear as the time of the congress approached that it would see a major gathering of Communist notabilities largely of the " non-political " variety and there was considerable pressure on the British government to state its attitude towards it. It was made clear that the government would reserve its right to refuse admission to such foreign delegates as it considered dangerous from the point of view of security. And large numbers of visas were in fact refused; further numbers of delegates with visas were denied admittance at the ports or turned back there if they came from countries whose nationals did not normally require visas to visit Britain. As a result, according to the organizers of the congress, almost all the members of the Peace movement's central committee, including its chairman, J. F. Joliot, and its secretary general, Jean Laffitte, were denied admittance. Of the proposed Soviet delegation of 65 persons, 45 had their visas refused, including the historians B. D. Grekov and V. P. Volghin, the writers A. E Korneychuk, K. M. Simonov and Ilya Ehrenburg, the composer Dimitry Shostakovich and the metropolitan Nikolay of Krutitsy and Kolomna. Persons who had their visas granted were on the whole less eminent though they included the well-known film producer V. I. Pudovkin. In the circumstances, the meeting at Sheffield was turned into a preliminary congress at which the chief figure was the painter Pablo Picasso. The congress was then moved to Warsaw where it was opened on Nov. 16. The principal figures in the British delegation included the scientists J. G. Crowther and J. D. Bernal and Hewlett Johnson, the dean of Canterbury.

Criticism of the British government's handling of the congress was voiced in parliament by S. S. Silverman and other left-wing members of the Labour party. On the other hand, J. McGovern argued that the whole thing could well have been stopped. The government's action which was on the whole supported by the opposition was vigorously defended by the home secretary, James Chuter Ede. His argument was that the congress was a lawful assembly which could not have been prohibited except by legislation for which there was no demand. On the other hand, he denied that the rights of free



Delegates of North Korea at the second world peace congress held in Warsaw, Nov. 1950.

speech and assembly enjoyed by British citizens should necessarily and as of right be made available to those whose chief purpose in coming was to throw doubts upon the wisdom of British foreign policy and so to impede the rearmament programme and other measures necessary for the country's security. Since the preliminary propaganda for the congress made it clear that such was indeed its purpose, the argument was really a political one—whether the harm that such propaganda might do could outweigh the harm done by the departure from what was claimed to be the principle of free political utterance for Britons and aliens permitted in the past. While much of the press supported the home secretary on this point, some dissenters urged that British common sense could be trusted to see through such obvious propaganda and that the congress ought to be free to kill itself with ridicule. More important perhaps was the observation that suggested itself that the home secretary had shifted his ground from that of " security " to that of politics. The latter would indeed seem to have been the more cogent one, since, for instance, the elderly Soviet academicians named might give respectability to a propaganda move but could hardly menace national security. Indeed a number of the better-known delegates had been quite recently allowed to visit England under other auspices. The whole affair showed how difficult it was to handle the problem of Communist infiltration and propaganda along lines conformable to past democratic practice.

Anti-Communist Legislation. Measures taken to meet the Communist danger included legislation as enacted in the U.S., the Union of South Africa and in Australia, where the Seamens' union attempted to hold up shipments for Korea during the course of the year. The justification of such legislation was held to be that as Communists were primarily the instruments of a foreign power and not a genuine political party they ought not to continue to profit by the freedoms normally permitted to political parties within a democratic system. Its effectiveness in the case of a movement with a long tradition for subterranean activity was often questioned; and in other countries similarly concerned no such measures were proposed.

At the root of arguments over such action and over other anti-Communist measures in the field of propaganda and so on lay a strong divergence of opinion within the free world. This was expressed in some of the arguments at the Congress for Cultural Freedom held in Berlin under U.S. auspices at the end of June. Some of the delegates to this congress, including a number of ex-Communists, argued that since Communism was the only important threat to freedom all other divergences should be sacrificed to the building up of a single world anti-Communist front of the same monolithic quality and fighting ardour as in the case of the Communist

movement itself. Such was also the theme of James Burnham's widely read book *The Coming Defeat of Communism.* Others took the view that more care must be taken not to sacrifice in the struggle the liberal and democratic values intended to be defended and suggested a rather more moderate programme of counter-action on both the political and the propaganda sides. In Great Britain this view was given adequate expression in October, in the Royal Institute of International Affairs study-group report entitled *Defence in the Cold War.* But it was not on the whole in countries of predominantly white population and with advanced economies but in the so-called " backward areas " that the main impact of the Communist offensive was concentrated.

Chinese Communism. Although some people were pointing to the awakening masses of Africa and to the middle east as the most promising foci of penetration from the Communist point of view, the centre of activity was still in southern and eastern Asia. The horizon in Asia was dominated by the fact that the avowedly Communist-controlled Chinese people's republic was master of the entire mainland of China. Disputes over the precise nature of Chinese Communism had always existed among authorities on far eastern affairs and it was frequently pointed out how genuine were the Chinese Communists' indigenous roots in agrarian discontent and in protest against previous misgovernment. By 1950 it was obviously not intended to imitate directly the Soviet economic system, for which the material conditions scarcely existed. But the leading figures in the new government made no secret of the fact that the Soviet past provided them with a programme for future development and that they could be considered as in the N.E.P. (new economic policy) stage that the Soviet Union itself had outgrown with the first five-year plan. As such their policy was applauded by the Russians themselves.

What was less clear was the relation of the Chinese government to the world struggle of Communism and to its Moscow headquarters. It was noticed that when relations with the U.S.S.R. were put on a treaty footing in February the Russians retained for themselves, for the time being at least, tangible guarantees. On the other hand, there were repeated pronouncements by both sides that their policies in world affairs were identical and on all issues that arose during 1950, there seemed to have been at least outward harmony between them. If this harmony was genuine, it was clear that the Communist offensive in Asia had received an important and perhaps decisive accretion of strength. For it would mean that an Asiatic people which could not be suspected of white imperialism would take the lead in attacking what remained of white rule and influence in Asia, effectively combining the racial with the Communist appeal. The Chinese, too, with their large overseas colonies in Malaya, Thailand and elsewhere in the area and with their historic claim to suzerainty over many of the territories directly involved were in a strong position to reinforce local Communist movements, so as to drain away the strength of the non-Communist world in resisting them, while the Soviet Union's own forces remained intact.

In the preparation and launching of the attack by North Korea on South Korea, direct Chinese intervention like direct Soviet intervention was not observable. It was only when the United Nations forces crossed the 38th parallel and approached the Manchurian frontier that Chinese " volunteers " in large numbers began to appear in the fighting line. Meanwhile Chinese territory offered an obvious asylum for the regrouping and re-equipping of the North Koreans themselves. A similar role to the latter was played by China in the case of the continued warfare waged by the Communist-dominated Vietminh against the French-sponsored Vietnam administration. Both areas illustrated the enormous advantage derived by the Communist movement from its ability to choose any point on the circumference of the Soviet Union or China for attack, and thus force the western powers to sacrifice their long-term defence plans for the sake of stopping an immediate threat. Of the two, that in Indo-China was the more serious. Korea was, it is true, the cover for Japan, but in Japan, despite continued Soviet protests, Communism was held firmly in check by General Douglas MacArthur's control. And the dissatisfaction felt in Moscow at the failure of the Japanese Communists to make headway was reflected in the splits and purges inside the party itself. But Indo-China, besides its importance as a source of supplies of many precious commodities including the all-important rice, provided a cover for the much more vulnerable Thailand and for a Burma only with difficulty struggling out of civil war and anarchy. Moreover, the French contribution to European defence was seriously weakened by the drain of the Indo-China war and its unpopularity provided a good rallying-cry for Communism in the metropolis. In Malaya, Communist " banditry " among the Chinese element in the population continued to demand a large military effort from Great Britain.

Three newly independent countries in Asia also faced a continued Communist threat in 1950: India, the Philippines and Indonesia. Peasant outbreaks in India, such as the trouble among the hillmen of Hyderabad, were clearly fomented by Communist agents and eagerly commented-upon by the Soviet press. For the greater part of 1950, the Indian government chose to regard the Chinese Communists as amenable to peaceful persuasion and made itself the spokesmen of those powers which sought to have the Communist government in Peking replace the Kuomintang government at Formosa as the one to be represented at the United Nations. But the invasion of Tibet at the beginning of November, after much previous propaganda about the necessity of " liberating " it, might, it was thought, provoke a change in the Indian attitude.

TABLE II. MEMBERSHIP OF THE COMMUNIST PARTIES IN THE COMMUNIST-CONTROLLED COUNTRIES

	1939	1947	1950
U.S.S.R.	2,478,000	6,300,000	?
China	?	2,000,000	5,000,000*
Czechoslovakia	80,000	1,500,000	2,300,000
Poland	20,000	800,000	1,360,000
Rumania	1,000	700,000	1,000,000
Hungary	30,000	?	950,000
Bulgaria	8,000	500,000	460,000
Albania	1,000	?	70,000

SOURCE: *Bolshevik* (Moscow, April 1950) for the years 1939 and 1950 and *Partiynaya Zhizn* (Moscow, Oct. 1947) for the year 1947.

* This figure was announced from Peking on July 1, 1950. The report specified that 1,000,000 members were soldiers and 3,100,000 were inhabitants of the " old liberated areas ".

No brief geographical survey—certainly not one which excludes some important areas, Latin America for instance, altogether—could do justice to the widespread activity of the Communist movement in 1950. It worked not only through its avowed organization, but through organizations openly dominated by it, such as the World Federation of Trade Unions with its headquarters at Paris and the International Union of Students (at whose congress in Prague the representatives of non-Communist bodies, such as the British National Union of Students, were denounced as the agents of imperialist warmongers) and through a multitude of other " cover " organizations whose use had been developed to a fine art through 33 years of experience.

Fundamentally, its appeal rested upon persuading people to believe two facts— the first that they had grievances, and the second that in Soviet Russia such grievances did not exist. This was made possible by the limitations on free access to the Soviet Union and on free travel within it, which was as rigorous for the Soviet Union's proletarian friends as for those it branded as its bourgeois enemies. And it had two supplementary sources of strength: the first, the general fear

of the catastrophe of a third world war—a fear continuously and not unsuccessfully exploited to undermine the moral foundations of all measures of defence; the second, the fear that all those within reach of the Communist forces were bound to feel when they reflected what had befallen the anti-Communist élite of the countries under Soviet influence. Resistance to Communism in the Europe of 1950 demanded either courage or lack of imagination; and action through fear could always be rationalized as the acceptance of the inevitability of the Marxist historical scheme. Against the Communist movement, the disparate forces of organized religion, nationalism and western liberalism waged a fluctuating defensive war. (M. BLF.)

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CONGO, BELGIAN: *see* BELGIAN COLONIAL EMPIRE.

CONGREGATIONAL CHURCHES. At the annual assembly of the Congregational Union of England and Wales in May 1950 the secretary, Leslie E. Cooke, presented a plan for a three years' Forward movement for the denomination. The proposal arose from an examination of the diminishing membership and from concern about the urgent need for extension and advance. The assembly agreed to a campaign to increase the membership of the churches by 100,000 and to raise £100,000, largely for extension purposes; and the campaign was subsequently initiated.

Attention had been drawn at the assembly of 1949 to the anxieties which face ministers when they retire on a small allowance and without a home; and in 1950 a large house near East Grinstead was purchased, to be adapted for such ministers and their wives. It was proposed to make further provision as soon as possible.

The Congregational Union of England and Wales acquired the *Congregational Church Monthly*, hitherto privately owned and distributed: from Jan. 1951 it was to be the official organ of the union, edited by Mabel Small.

The London Missionary society, which represents the foreign missionary concern of the Congregational Churches, faced a serious situation in China: it appeared that missionaries who returned home on furlough would not be re-admitted to China (with rare exceptions), so that the society's service in that country would fairly soon cease, though the local Christian communities which it had established would continue.

The Colonial Missionary society has since 1836 represented the interests of Congregationalists in the Commonwealth countries and in the West Indies: its board of directors was in 1950 constituted a committee of the Congregational Union, the society being thus given a status as a department of the organized life of the churches.

The Rev. Howard S. Stanley's distinguished service to the denomination was recognized in his appointment as chairman elect of the Congregational Union for 1950-51: he had been moderator of the Lancashire province since 1945 and chairman of the Home Churches fund. (R. F. G. C.)

United States. For some years the Congregational Christian Churches had been planning a merger with the Evangelical and Reformed Church. During 1949, however, an anti-merger faction in the Congregational churches secured an injunction against further moves toward merger, and at the close of 1950 the case had gone to the appellate court.

The numbers of churches and members at Jan. 1, 1950, were: churches 5,679, ministers 5,744, church members 1,204,789, church school members 567,800. During 1949 $5,423,929 was contributed to benevolences and $28,491,418 for church support.

CONGRESS, U.S. The second session of the 81st congress convened on Jan. 3, 1950, adjourned on Sept. 24 for the biennial congressional elections, resumed sittings on Nov. 27 as a "lame-duck congress" and adjourned on Jan. 2, 1951. During the session 1,815 bills and resolutions were introduced in the Senate and 4,228 in the House of Representatives; 1,193 of these became law, 48 were vetoed by the president but several vetoes were overridden. The president asked from congress a comprehensive programme of "fair deal" domestic legislation as well as the continuation in 1950 of the economic and military aid programmes already operating in 1949. To finance these he presented the second largest budget proposals in United States history. Congress was generally unresponsive to the administration's domestic proposals. As in 1949 it refused to sanction a health insurance scheme, the Brannan plan for agricultural subsidies, further civil rights legislation or the repeal of the Taft-Hartley act. Congress, did, however, consent to an increased minimum wage, an extension of social security to about 10 million more citizens and a programme of slum-clearance.

In foreign affairs it complied more with the president's wishes. The European Recovery programme and the Mutual Defence Assistance programme were continued without hampering amendments and with adequate financial appropriations. Initial appropriations were made for the president's "point four" programme. The outbreak of hostilities in Korea accelerated action on these items and induced congress, despite the impending elections, to substitute a taxation increase of $4,700 million for an intended cut of $1,000 million. The Korean war also provoked legislation to remove the statutory limit on the size of the armed forces and to enable the president to control production and act against inflation. Communist activity inside and outside the U.S. prompted the passing of the far-reaching McCarran act. Vetoed by the president as unworkable and inimical to civil liberties, it was passed over his veto by overwhelming majorities on the eve of the Sept. 24 adjournment. As the year went on there was a marked weakening of the bi-partisan support for Dean Acheson and the administration's foreign policy, and congress registered strong pressure for an aggressively pro-Chiang Kai-shek policy in China and Formosa.

On Jan. 4 three new senators appointed to fill vacancies occurring in mid-term were admitted to the Senate, Herbert Lehmann of New York, William Benton (*q.v.*) of Connecticut and Harry Darby of Kansas. The division of party strength at the time of the November election was, in the Senate, 54 Democrats and 42 Republicans and, in the House, 262 Democrats, 172 Republicans and one American Labour, but the high proportion of Southern conservatives among the Democrats left President Truman with a congressional majority often more nominal than real. (H. G. N.)

CONGRESS OF INDUSTRIAL ORGANIZATIONS: *see* TRADE UNIONS.

CONSERVATIVE PARTY: *see* POLITICAL PARTIES, BRITISH.

CONSUMER CREDIT. During 1950 the main changes in the position of consumer credit in Great Britain occurred in the fields of hire purchase and credit sales, in both of which considerable extensions took place. These increases would undoubtedly have been greater but for the government's continuing to hold the opinion that undue hire purchase credit had an inflationary tendency and that

such transactions, so far as they affected consumer goods, should therefore be restricted. The money available for hire purchase sales in these articles was thus still limited: and for this reason many retailers, especially those whose liquid capital was already fully employed, could not handle as many transactions as were offered to them, being unable to obtain additional finance from their bankers or from the specialized houses that cater for this particular need.

The Hire Purchase and Credit Sale Agreement (Maximum Prices and Charges) order came into force on Jan. 23, 1950. Although closely following the previous control orders on this subject, the new regulations had several important effects. The principal one was that, for the first time since the restrictions necessitated by World War II were imposed, a service charge could be made for hire purchase facilities upon all articles. The only question which faced the retailer was whether the article that he wished to sell was subject to hire purchase control or not: if it was, then the deposit, the length of hire and the service charge were all regulated, together with one or two minor matters, mainly of detail; if it was not, then the terms could be negotiated between the trader and his customer. Although it might seem that the new order greatly widened the field over which hire purchase transactions could be extended, in effect the change was not so great as would appear, as in the main the majority of items suitable for hire purchase had already been covered.

The position at the end of 1950 therefore was that hire purchase terms were controlled (1) upon all price-controlled goods, other than new sewing machines, dictaphones, typewriters and office machinery generally; (2) upon all domestic furniture, whether price-controlled or not; (3) upon all bedding, whether price-controlled or not. Upon all other items, deposit, length of hire and service charge were matters for agreement between the two parties. In all cases (whether the control order applied or not) the agreement was subject to the provisions of the Hire Purchase act of 1938 for such transactions as fell within its scope; *i.e.*, generally speaking, transactions where the total hire purchase price was £100 or less.

A further legislative change affecting hire purchase credit was the repeal as from Oct. 9, 1950, of the Courts Emergency Powers act. This repeal made it legal again for an owner (subject to the relevant provisions of the Hire Purchase act) to recover goods let on a hire purchase agreement, where the hirer had become in arrears with his payments, without first having to obtain the sanction of the courts. (C. C. Ws.)

United States. As the economy of the U.S. during the year 1950 expanded with an unprecedented volume of production, earning power and retail sales, the credit used by consumers also increased in amount and their outstanding indebtedness at the end of the year exceeded $20,000 million. Because of the supposed influences of credit buying upon the price level and upon consumer expenditure patterns, and as a result of the greater use made of credit, consumer credit was again during 1950 brought under federal regulation. Although outstandings increased by about $4,000 million, or about 28%, during the year from Sept. 1949 to Sept. 1950, inflated prices accounted for a large part of the increase and when the debt outstanding is adjusted for the change in the price level, it is found to have increased by only 17% in 1950. This was not much different from its increase in 1949 over 1948, similarly measured, when it rose by 15·8%.

The largest increase during the 12-month period ending in Sept. 1950 was in instalment credit, which increased 33%. This was mainly the result of disproportionately large expenditures being made by consumers for motor cars and other durable household goods and of somewhat longer terms and lower deposits.

The significance of the volume of consumer debt, however, can be appreciated only in the light of the general economic conditions. Whereas total consumer debt in 1949 amounted to 8·1% of personal disposable income, in 1950 the ratio was 9·4%. Similarly, whereas in 1949 that debt was 8·3% of personal consumption expenditures, the following year it was 9·7%. Thus it is seen that consumer debt during 1950 increased relatively faster than some other aspects of the economy, but it was still not out of proportion to consumers' disposable income in comparison with the condition existing in 1939 when the debt was 10% of such income. Nevertheless, because of the impelling necessity to restrain inflation and exorbitant consumption expenditures in an economy faced with preparations for war, consumer credit was viewed as an area where restraining regulations would be of value. Consequently, the controls on instalment credit known as Regulation W were reissued by the Federal Reserve board. These fixed minimum deposits for various articles (*e.g.*, motor cars 33⅓%, furniture 15%) and maximum periods for repayment (*e.g.*, motor cars, furniture 15 months, home improvement materials 30 months). The immediate effect was to decrease the demand for motor cars and for some of the other listed articles. After a short period the market adjusted itself to the conditions and demand increased somewhat. (R. Ba.)

CONTRACT BRIDGE. For the first time in the history of the game, a three-cornered world championship match was played, at Bermuda (Nov. 13-16, 1950). It was won by the U.S., with Europe second and Great Britain third. The U.S. team comprised H. Schenken, J. Crawford, G. Rapee, S. Stayman, C. Goren and S. Silodor; the European, J. Werner, N. Nilliehook, R. Coch and J. Wohlin (Sweden) and E. Thorfinnsson and G. Gudmundsson (Iceland); and the British, M. Harrison Gray (captain), J. Tarlo, L. W. Dodds, K. W. Konstam, L. Tarlo and N. Gardener. Each team played 144 boards against each other team. The margins were: the U.S. beat Britain by 3,660 and Europe by 4,720; Europe beat Britain by 1,940.

For the third year in succession Great Britain, after a very close finish, won the European championship, which was held at Brighton from June 4 to June 11. Sweden was again second; Iceland was third and Italy fourth. The British team was: M. Harrison Gray, K. W. Konstam, L. W. Dodds, J. C. H. Marx, L. Tarlo and N. Gardener. Great Britain also won the ladies' championship, for the first time; Belgium was second and France third. The British team was: Colonel G. G. J. Walshe (non-playing captain), Mrs. F. Gordon, Mrs. H. Renshaw, Mrs. P. Williams, Mrs. H. R. Evans, Mrs. T. S. Crisford and Mrs. A. N. Carr.

The Camrose cup, an international contest between England, Scotland, Wales, Northern Ireland and the Bridge Association of Ireland, was easily won by England.

The Waddington cup for masters' pairs was won by R. Sharples and J. Sharples; K. W. Konstam and G. Mathieson were runners-up. The Gold cup was won by J. T. Reese's team (J. T. Reese, B. Schapiro, A. Meredith, H. Leist, S. Lee and Mrs. A. L. Fleming). Crockford's cup was won by Mrs. A. L. Fleming's team (Mrs. A. L. Fleming, E. Bruce Parker, J. T. Reese, B. Schapiro, K. W. Konstam and G. Mathieson).

Four major congresses were held during the year: by the English Bridge union at Harrogate, by the London association at Earls Court and two, by the Tournament Bridge association and the English Bridge union, at Eastbourne.

A feature of the year was the increasing popularity of tournament bridge among student bodies and among players from business houses and industrial concerns. Teams from Oxford and Cambridge occupied second and third places in the Richard Lederer Memorial cup at Eastbourne.

On the technical side the Acol system strengthened its hold among leading tournament players and was played by 15 of the 22 partnerships in the masters' pairs. (T. RSE.)

United States. Bridge-playing in the United States was not much affected by the sudden popularity of canasta (*q.v.*) except that those taking up card playing for the first time were apparently learning canasta instead of contract bridge. For the first time in several years, new trends in bidding appeared. Principal among these was a shift in methods of hand valuation. Many players who for years had valued their hands by "honour tricks" began instead to use a "point count" in which an ace counts four points, a king three, a queen two and a jack one, with various methods of valuing long and short suits. A bidding innovation that became popular was the "Stayman convention" of no-trump responses, which spread more rapidly than had any other convention since Easley Blackwood's slam method was introduced in the 1930s.

Winners of the principal championship contents of the American Contract Bridge league in 1950 were:

Masters' individual, Morrie Elis, New York city; *masters' teams*, Howard Schenken, George Rapee and Samuel M. Stayman, New York city; John Crawford and Sidney Silodor, Philadelphia; *masters' pairs*, C. W. Yorke, Manuel Sherwin, Flint, Michigan; *open teams, cumulative scoring (Vanderbilt cup)*: Schenken, Rapee, Stayman, Crawford and Oswald Jacoby of Dallas, Texas; *open teams, match-point scoring*: Charles H. Goren, Sidney Silodor, Philadelphia; Mrs. Helen Sobel, Myron Field, B. Jay Becker, New York city; *open pairs*, Jack Kushner, Springfield, Massachusetts, and Mark Kelleher, Stratford, Massachusetts. (A. H. MD.)

CO-OPERATIVE MOVEMENT. During 1950 the International Co-operative alliance, which still included most of the world's co-operative movements from both sides of the "iron curtain," held together formally but was rent by serious disputes between the two groups. No full international congress was held, the next one being due to meet in 1951 at Copenhagen. At meetings of the committee responsible for decisions between congresses the Soviet group was regularly outvoted by the representatives of the western countries, and a split in 1951 seemed to be highly likely. The principal controversies during 1950 turned on the demand of the Soviet co-operatives that the I.C.A. should associate itself with the peace congress movement organized from the U.S.S.R. and on the conditions to be laid down for dealing with new applications for membership. Among the applicants were the re-organized co-operative movements of Hungary and Eastern Germany, which the committee decided not to consider individually until it had made a general interpretation of the rule governing membership. It then drew up a series of conditions: bodies eligible for membership must rest on voluntary membership; must be free to choose their own officers and to discuss any matter of policy without restriction; must be independent of the state and of political parties; and so on. The Soviet and some other delegations objected that these interpretations of rule were *ultra vires*, as constituting an alteration of rules without congress sanction; but they were overruled, and the East German and Hungarian movements were not admitted. Administratively, the I.C.A. was firmly in the hands of the western co-operators, who no longer made any attempt to work in harmony with the Soviet bloc.

In 1950 the I.C.A., as a recognized body under the United Nations charter, submitted to the Economic and Social council a resolution demanding that world oil resources be brought under the control of the United Nations. The council could not find room on its agenda for this proposal during 1950 but was expected to debate it early in 1951. In order to increase its influence with U.N., the I.C.A. decided to appoint permanent co-operative representatives at Geneva and at Lake Success; it also acquired new headquarters in London and decided to increase its contribution rates to cover these additional costs. It was further determined to set up an agricultural auxiliary to represent the agricultural co-operatives of the various countries and to make special efforts to promote joint working between the agricultural and the consumers' movements in each country.

Great Britain. In Great Britain the Co-operative union recorded for 1949 further increases in both membership and trade but had to face a further fall in rates of dividend on purchases. Membership of retail consumers' societies rose by 250,000 to 10,413,618, and the value of retail trade increased by £46 million to £549 million; but the average rate of dividend fell from 1*s.* 5½*d.* to 1*s.* 4½*d.* in the £1 (*cf.* 1*s.* 9*d.* in 1945). This continuing fall in dividend rates was due partly to the reluctance of the co-operative societies to raise prices; but the price policy adopted did not seem to have had much effect in diverting trade to the co-operative movement from its rivals. As far as it was possible to judge, the co-operative share in total retail trade had fallen a little, or at best been barely maintained. This was to be attributed partly to the fact that the co-operative share was greatest in the trade in basic foods, on which consumers spent a diminishing fraction of total income, on account of public subsidies as well as of changing demand. The leaders of the movement were seriously perturbed about the fall in dividends and about the check to co-operative expansion. The "national membership" plan introduced in 1948 seemed to have had very little effect upon sales.

During the last months of 1949 and the early part of 1950 there were extended discussions between the co-operative leaders and the Labour party arising out of the Labour election programme. Co-operators complained that they had not been consulted when plans for further nationalization were being worked out and demanded prior consultation about any future projects. The Labour party, under pressure, abandoned its scheme for the nationalization of industrial insurance, which threatened the Co-operative Insurance society, and substituted a scheme of "mutualization," of which nothing was heard after the election. It appeared that assurances had been given to co-operators that their views would be fully considered in future, and the stalemate produced by the election caused the shelving of most of the controversial issues. Many co-operators criticized the official statement issued by the Co-operative union on "The Place of Co-operation in a Collectivist Economy" as unduly negative and lacking constructive ideas.

Europe and China. In Europe governments east of the "iron curtain" took further steps to bring the co-operative societies under Communist control, especially the peasant co-operatives, which were being gradually forced into the framework of a collective system. In Yugoslavia, on the other hand, the tendency was to encourage more co-operative autonomy, in industry as well as in agriculture, and to stimulate measures of workers' control in the factories as a counterblast to Soviet insistence on "democratic" centralism. In western Europe the most notable development was a further recovery of consumers' co-operation in Western Germany, including a notable revival of wholesale co-operation. Italian co-operation also recovered further, but was rent by doctrinal disputes. Outside Europe, the Chinese movement underwent extensive re-organization after the Communist victory; but the government appeared to be handling the situation carefully, in order not to disturb the foundations of rural credit. (G. D. H. C.)

United States. During 1950 the co-operatives made substantial progress in almost every field. Total membership in the U.S. was considerably in excess of 10 million.

The credit co-operatives or credit unions, which had the largest membership of any type of co-operative in America,

added more than 100,000 new members in a special campaign, and reported more than 5 million members in the U.S. with another million in Canada, Hawaii, Puerto Rico and Jamaica.

The rural electric co-operatives, which constituted a large section of the co-operative movement, added 380,000 subscribers. Rural electric co-operatives served more than 3 million members in the U.S. and brought electric light and power to millions of farm homes.

Congress rejected by a narrow margin a proposal to create a co-operative housing administration but established a co-operative section within the Federal Housing administration to assist in the development of co-operatives. By the end of 1950 applications had been submitted for $200 million worth of co-operative housing projects under this programme and a few of these projects were already under construction.

Very few co-operative food stores were opened during the year, but most of the established retail units continued to grow in membership and volume of business. About 1,000 co-operative food stores handled an estimated $100 million worth of foodstuffs during the year. Marketing associations reported 3,600,000 members with a business of $7,195 million by the close of 1948. The marketing co-operatives handled such diverse commodities as cotton, dairy products, fruit and vegetables, grain, dried beans and rice, livestock, nuts, poultry, tobacco, wool and other products. Co-operative purchasing associations buying feed, seed, fertilizer and other farm supplies, numbered in their membership 2,260,000 farmers. Business for the 1950 season was estimated at well above the $1,440 million mark which had been its previous record. Co-operative petroleum associations weathered a severe economic storm which wiped out many other small independent refining companies as the industry went further into catalytic cracking and other expensive processing methods. Petroleum co-operatives operated 20 petroleum refineries, 1,500 wells and nearly 2,000 miles of pipe line. The Insurance Conference of the Co-operative league, made up of 14 companies, reported continued rapid growth in this field. Insurance in force, which had reached $830 million by the end of 1949, was estimated to have passed the $1,000 million mark.

Two operating co-operatives in the international field continued to perform an outstanding international public service. They were CARE (Co-operative for American Remittances to Europe), which had distributed more than $100 million in food and textile packages overseas since 1945, and the International Co-operative Petroleum association which supplied oil and other products from co-operatively owned oil wells, pipe lines and refineries to farm and city consumers in such diverse areas as South Africa and the Scandinavian countries. (W. J. CL.)

CORN: *see* GRAIN CROPS.

COSMETICS: *see* SOAP, PERFUMERY AND COSMETICS.

COSTA RICA. Central American republic, located between Nicaragua and Panamá. Area: 19,238 sq.mi. Pop.: (1927 census) 471,524, (Dec. 1949 est.) 850,659, classified as about 80% white, 16% mixed, 3% Negro and less than 1% Indian. Language: Spanish. Religion: predominantly Roman Catholic. Chief towns (pop., 1949 est.): San José (cap., 79,694); Heredia (10,730); Alajuela (11,187). President, Otilio Ulate Blanco.

History. The political highlight of the year was the discovery and frustration of a revolutionary plot. According to the official announcement, issued on Aug. 12 by President Ulate, the conspiracy involved several partisans of former president Rafael Angel Calderón Guardia, and a number of Communists. Among the 300 persons arrested as suspects was Manuel Mora, leader of the Vanguardia Popular, the outlawed Communist party. Mora had returned to the country in April after two years of exile in Mexico. Many of those arrested were released shortly afterwards, and the incident passed without a suspension of constitutional guarantees.

Financial matters occupied the bulk of the government's attention during the year. The black market in foreign exchange was undercut early in April by a law creating a legal free market. On Sept. 22 a stock exchange was opened in San Jose with a capital of 600,000 colones. Although about 60% of the shares were owned by the nationalized banks and other government organizations, the market was reportedly under private management.

The council of ministers decided on July 27 that Costa Rica would support the United Nations' action in the Korean crisis, and offered volunteer soldiers and sites for air and naval bases to the U.N. forces.

Education. Schools (1948): primary 919, pupils 99,550; secondary 44, pupils 10,055. The national university had 907 students and a teaching staff of 180 in 1945.

Foreign Trade. Exports in 1949 were valued at U.S. $31·4 million ($31·8 million in 1948); imports at $43·4 million ($42·3 million in 1948). The chief exports in 1949 were: bananas, coffee, abacá fibre, cocoa and sugar. The U.S. took 75% of the exports and supplied 75% of the imports. Banana planting during 1950 was expected to make Costa Rica the leading producer in the world by 1951 with a yield of more than 13 million stems. The 1950 coffee crop was 500,000 bags of 132 lb. each, about 150,000 bags over the 1949 crop.

Transport and Communications. At the end of 1947 there were 414 mi. of public and 255 mi. of private railways, and 1,014·9 mi. of improved highways. At the end of 1948 there were 4,005 cars and 2,845 trucks and buses registered. In 1948 the country had 32,000 wireless sets and 7,100 telephones.

Finance. (Million colones) budget (1949 actual): revenue 125·4, expenditure 125·4, leaving no deficit for the first time since 1940; (1950 est.) balanced at 108. National debt (Dec. 1949): foreign 147·1; internal 267·8. Currency in circulation (June 1950): 98·4. Monetary unit: *colón*, valued officially at 17·6 U.S. cents and on the free market at 11·3 U.S. cents (Oct. 1950). (M. L. M.)

COST OF LIVING: *see* PRICES.

COTTON. Activity in the cotton industry in the United Kingdom was maintained during 1950 and particularly in the closing months of the year business was on an increasing scale. The mills continued to run as fully as the shortage of labour allowed. Further progress was made in recruiting, the number of workers available rising above 312,000, an increase of 10,500 during the year. This progress enabled higher production levels to be obtained and both yarn and cloth output targets set by the government were achieved. Output of cotton and rayon yarn over the year exceeded the 1949 total by more than 60 million lb.

The raw cotton supply and price situation was the principal matter of concern during the year, and the selling rates of the Raw Cotton commission steadily increased. The standard symbol of American cotton, quoted at 30·15*d.* a lb. in January, had risen to 47·80*d.* a lb. by December. The cost of long-staple Egyptian Karnak cotton rose from 41·10*d.* to 50*d.* a lb. by July and was quoted at 78*d.* a lb. in December. Short-staple Ashmouni began the year at 38·85*d.*, reached 64·30*d.* a lb. in October and was quoted at 73·80*d.* a lb. in December. The prospect of much smaller supplies of American cotton in view of the limited crop in the U.S. caused the commission to notify British spinners that the allocation of purely American varieties would be cut from an average of 15,000 bales a week to less than 10,000 bales a week for the 15 months from July 1950 to Sept. 1951. Alternative supplies were stated to have been secured to meet the deficiency.

Despite the full engagements of producers, shipments of yarn and cloth abroad declined as compared with the 1949 totals. For the first 11 months of 1950 shipments of cotton piece goods amounted to 746,979,000 sq.yd. as against 903,548,000 sq.yd. in the whole of 1949. Yarn shipments

for the 11 months totalled 64,396,100 lb. against 82,030,000 lb. for the previous year. Commonwealth markets were again the leading consumers of cloth, chiefly British West Africa, Australia, South Africa, Pakistan and New Zealand. Several European markets took larger quantities of yarn, including Norway, Denmark and Germany.

The full impact of the rearmament programme was not felt, although government departments increased their purchases towards the end of the year. In May the Board of Trade decided to institute an investigation into the prices and production of utility cotton cloth. An interim report issued in November proposed an increase in converters' ceiling prices, the introduction of a system basing maximum charges on a sliding scale according to raw material rates and an easing of the rigid specifications for utility cloth. Operatives in the textile dyeing, bleaching, printing and finishing trades obtained higher wages in November, and an agreement on hours of work for weavers operating automatic looms on double shifts was also reached. A claim for an extended holiday with pay for spinning and weaving operatives was rejected by the National Arbitration tribunal in November. All cotton spinning and weaving workers were granted an increase of 10% on current earnings in December.

Representatives of the British cotton industry joined delegates from the U.S. in talks with representatives of Japanese textile interests in Osaka during May. Later a similar delegation from Britain met representatives of the Indian cotton industry in Bombay. Redeployment projects were carried out in more than 20% of spinning and doubling mills in Britain and the number of automatic looms installed was stated to have increased from 18,000 at the end of the war to nearly 37,000, equal to 12% of running looms. Under the government's scheme to subsidize spinning re-equipment plans costing £13 million were put forward for adoption at 145 mills.

Traders found themselves in a stronger position than ever at the end of the year. Full order books were the general experience and the scarcity of certain goods became more pronounced. The high level of prices was fully maintained.

(F. W. TA.)

United States. *Manufacture.* The increased rate of activity in the U.S. cotton industry that began in the second half of 1949 continued in 1950, with additional stimulation provided by international events from June onwards, pushing the industry to boom levels. At the end of the year, mills were booked up with orders well into the second quarter of 1951. Production in 1950 was about 26% more than in the previous year and the largest since 1943. Production during the first nine months of the year was 7,245 million yd., as compared with 6,092 million yd. in the corresponding period of 1949. In the final quarter production was running 25% higher than in the same quarter of 1949; operation during November was at a rate of 143% capacity on a two-shift 80-hr. week basis. Prices advanced as much as 27% on some standard cotton textiles during the year; a price index for 17 basic cotton grey goods registered 69·07 cents per lb. in January, declined to 64·65 cents in May, then rose to 89·16 cents at the end of October.

Production. Unlike 1949, when the raw-cotton surplus and its temporarily unsolved problems were dominating factors, the short 1950 crop in the face of a mounting demand presented a new and very different set of problems. The U.S. cotton crop of 1950 of 9,884,000 bales (of 500-lb. gross weight) was one of eight since 1900 of less than 10 million bales, whereas the 16,128,000 bale crop of 1949 was the largest since 1937 and the fourth largest on record. The average for the preceeding ten-year period was 11,599,000 bales. Only 18,654,000 ac. had been planted to cotton, the smallest area since 1885, partly because of wet weather at planting time and some labour shortage, but more especially because the government, to avoid another excess crop, set the acreage allotment at 21,600,000 ac. and put cotton under marketing quota controls.

Cotton prices during 1950 set a new record high price since 1870 of 44·14 cents per lb. on the December futures on the New York Cotton exchange. The previous record was 43·75 cents per lb. made in July 1920. The probable average price to growers for the 1950 crop was indicated at 40 cents per lb., compared with 28·58 cents average for the 1949 crop, though there was some concern near the end of the year about the level of a probable ceiling price.

In 1949 and early 1950 exports were strongly pushed. Later in 1950, when it became clear that the world demand was insistent, that prices were inflating, that Commodity Credit corporation stocks were dwindling and that the 1950 crop was a small one, export allocations were ordered, first comprising 2 million bales for the period Aug. 1, 1950, to March 31, 1951, but later increased to about 3,854,000 bales. When supplies became rapidly and acutely short the U.S. Department of Agriculture announced that all curbs in the form of acreage allocations and marketing quotas for the 1951 crop were to be removed; that at least 27 million planted acres and a 16 million-bale crop were officially needed and that the 1951 crop would be supported at 90% of parity.

World Production. World cotton production in 1950 was 14% smaller than in 1949. The preliminary estimate for the crop for 1950-51 indicated 26,925,000 bales as compared with the 31,190,000 bales of the previous year, and 31,695,000 bales average during 1935-39. Acreage declined to 65,370,000 from 68,770,000 in 1949 and was substantially below the 81,142,000 ac. of pre-World War II. Mexico harvested 1,800,000 ac. against 1,416,000 ac. in 1949, producing a record crop of 1,040,000 bales, or three times the prewar average. India increased production to 2,650,000 bales from 2,300,000 bales the previous year. Egypt reported a near record crop of 2 million bales. The crop in China and the U.S.S.R. was also believed to be larger than in 1949. (*See* also TEXTILE INDUSTRY.)

(J. K. R.)

COUNCIL FOR MUTUAL ECONOMIC AID.

On Jan. 25, 1949, it was announced in Moscow that an economic conference had been attended there by representatives of Bulgaria, Czechoslovakia, Hungary, Poland, Rumania and the U.S.S.R. The conference noted considerable increase of trade among the countries mentioned and alleged that the governments of the United States, Great Britain and certain other countries of western Europe had been boycotting trade relations with the people's democracies and with the U.S.S.R. because of these countries' opposition to the Marshall plan on the ground that it violated their sovereignty and the interests of their national economies. To establish still broader economic co-operation among the countries of people's democracy and the U.S.S.R., it was accordingly decided by the conference to institute a Council for Mutual Economic Aid (*Soviet Ekonomicheskoy Vzaimnopomoshchi*), to be composed of representatives of the six founder countries, "on the basis of equal representation." It was to be the council's task to organize the interchange of economic experience, of technical assistance and of help with regard to raw materials, foodstuffs, machinery and equipment. The Moscow communiqué stated that the Council for Mutual Economic Aid would make decisions only with the consent of the country concerned. It was also decided that the council should be an open organization, which might be joined by other countries of Europe sharing its principles and desiring to participate in broad economic co-operation with the six founder countries.

On Feb. 22, 1949, it was announced at Tirana that Albania had been admitted to the council. The Albanian representative was present when the Council for Mutual Economic Aid met at Sofia from Aug. 25 to 27, 1949. Admission of the German Democratic (Eastern) republic was announced in Moscow on Oct. 1, 1950. This followed the visits of Walter Ulbricht, vice premier of Eastern Germany, to Warsaw, Prague, Budapest, Bucharest and Sofia, the recognition by the Eastern German government of the Oder-Neisse line as the permanent Polish-German frontier (July 6, 1950) and the statement by the same government that there were no territorial questions between Germany and Czechoslovakia and that the resettlement of Germans from Czechoslovakia had been settled in "an unalterable, just and permanent manner" (June 23).

With the admission of Eastern Germany to the council the economic framework of Soviet-dominated Europe was completed. No details were published about the organization of the Council for Mutual Economic Aid and the scope of its decisions. (*See* also EASTERN EUROPEAN ECONOMIC PLANNING.)

COUNCIL OF EUROPE. During the year the Council of Europe continued to take shape. Its session, which took place in the House of Europe at Strasbourg, a new building well designed for its purpose, was divided into two periods. In August the consultative assembly drew up a large number of resolutions, six of which were commended to the special attention of the committee of ministers and the national parliaments. In October the ministers met in Rome to consider them; their report came before the assembly during the second part of its session in November.

At the beginning of the session, two associate members were welcomed in the assembly, the German Federal Republic and the Saar. At its meeting on April 1, the committee of ministers decided to invite both these countries to become associate members, that is to say, to be full members of the consultative assembly without representation in the committee of ministers. At first, there was some hesitation in western Germany about accepting the invitation, particularly among the Social Democrats, whose leader, Kurt Schumacher, declared that they would not agree to membership of the Council of Europe if the Saar were admitted as a separate member. On May 2, the Saar Legislative Assembly accepted the invitation, but discussions continued between the Federal Republic and the western allies, in the course of which Germany received the assurance that it would be treated as an equal member of the assembly in all respects. Schumacher maintained his opposition, however, though it became evident that he had not the support of the whole of his party. Finally, on May 9, Konrad Adenauer, the chancellor, announced that his government had decided to introduce a bill accepting associate membership. On the same day the Schuman plan for pooling the coal and steel of western Europe was announced by the French government and was welcomed in Germany, and a few days later the foreign ministers of Great Britain, France and the U.S. announced considerable modifications in the occupation regime. These events no doubt influenced German opinion in favour of accepting membership of the Council of Europe and on June 15 the Bundestag passed the bill authorizing membership by 220 votes to 152. There was still some doubt as to whether the Social Democrats would agree to nominate delegates for Strasbourg, but in the end the party decided to do so. When the assembly met in August the German Federal Republic was accordingly represented by a full delegation of 18 members drawn from all the principal parties.

The salient features of the 1950 session were: first, the growing authority of the council as the mouthpiece of a united Europe; secondly, its agreement that for the present at any rate no kind of European federation was possible, but that unity should be sought by a more gradual approach along functional lines; thirdly, the first outline of the method of making this approach effective.

One of the first items of business was the adoption of a resolution supporting the action of the United Nations in Korea. It should be noted that this matter was brought before the assembly by the committee of ministers. This was not only a recognition of the growing political importance of the assembly, but also a sign of the closer relations between the two bodies. Their relations were further improved by the practice of delegating one of the ministers—Seán MacBride in August and Count Carlo Sforza in November—to present and explain the report of the ministers to the assembly.

The most important feature of the 1950 session was the debates on the creation of a European army. These debates were regarded by some delegates, notably by the representatives of the British Labour party, as being out of order, because defence matters were excluded from the purview of the council by its statute. Against this it was argued that, while the technical and military aspects of defence were outside its scope, the assembly was entitled to discuss the political aspects. Defence was indeed the primary political question of the moment, which no assembly claiming to represent Europe could possibly ignore. Winston Churchill therefore proposed a resolution for the creation of a European army "subject to unified democratic control and acting in full co-operation with the United States and Canada." The resolution was carried by 87 votes to 5, with 27 delegates abstaining; the committee of ministers, however, declined to accept it, holding that it was *ultra vires*. Nevertheless Robert Schuman, with the consent of most of the ministers, appeared before the assembly in November to explain the Pleven plan for a European army. His speech deeply impressed the assembly, who on Nov. 24 passed by 84 votes against 5 a resolution in favour of a common system of European defence within the framework of the North Atlantic Treaty organization. There were 19 abstentions, including the British and the German socialists. The former stuck to the legal plea that the debate was out of order. The representatives of the German majority parties supported the resolution. They agreed with the general view that Germany must be treated as an equal, but that there should be no revival of a German national army with a German general staff. The German Socialists, however, because they feared a new militarist threat to democracy, would not vote for any motion involving German rearmament, until there was a European political authority to control it as an integral part of the rearmament of Europe. The vote of the assembly made it clear that in the view of the great majority European defence could only be secured if it were organized on a joint basis.

The issue between the federalists and the "functionalists," which had been left open at the end of the 1949 assembly, was twice debated. On both occasions there was a large majority against federation. This decision was determined by the facts that Great Britain and the Scandinavian countries would not agree to any federal scheme and that without them it was impossible to unite Europe effectively. Even a motion for partial federation was rejected, largely by the votes of French, German and Italian delegates who wanted federation but who thought it impracticable without British participation. The doubt as to the immediate objective of the Council of Europe was thus dissipated. Henceforth its aim was no longer equivocal but was to be determined by the realities of the situation. Its approach to European unity for the present at any rate was to be piecemeal.

The method of this approach was outlined in a resolution adopted by the assembly in August. In 1949 it had agreed



A general view of the opening of the second session of the Consultative Assembly of the Council of Europe at Strasbourg, Aug. 1950. This was the first meeting of the assembly in the newly built assembly hall.

that it was desirable to create a political authority " with limited functions, but real powers." In order to achieve this aim, it was proposed that " within the framework of the Council of Europe specialized authorities should be instituted which would be competent respectively in the political, economic, social, legal and cultural fields." Each member state would be free to accede to any or none of these bodies, which could not be set up without the unanimous approval of the committee of ministers. The latter agreed in principle with this resolution but referred it to a meeting of " senior officials," who were to report by March 1, 1951.

A proposal for making the council a real parliament, submitted by Ronald Mackay (Great Britain) during the November meeting of the assembly was sent to a committee of seven for examination Under this it would be open to the assembly to adopt legislative measures in the form of international conventions. If they were accepted unanimously by the committee of ministers, that is by the governments which they represented, these measures would become acts of the council, which would be binding on all its member states, and would be enforced by the council. As a beginning the Brussels treaty organization and the Organization for European Economic Co-operation would be brought under the Council of Europe.

Apart from these constitutional matters, the assembly passed three other resolutions of special importance. The convention on human rights originally drawn up at the 1949 session was finally adopted with modifications proposed by the committee of ministers. This convention laid down a code of rights and liberties to which every citizen was entitled. It was to be enforced by a European commission and a Court of Human Rights. Its most important feature was that the Council of Europe would thus become responsible for ensuring that the elementary freedoms were respected by all its member states. When ratified, the convention would be the council's first legislative act.

Another important resolution was that on full employment, which approved this aim in principle and requested the governments to announce publicly the degree of employment which they would endeavour to maintain. Finally the assembly declared itself in favour of a European code of social security to be drawn up as a convention by the Council of Europe in collaboration with the International Labour organization. For this purpose a European Labour conference would be convened on the same tripartite basis—governments, employers and workers—as other regional conferences under the auspices of the I.L.O. Both these resolutions were generally approved by the committee of ministers, and steps were taken to give effect to them.

The Council of Europe was described by one of its most distinguished members as " a living plant." It was now well above the ground, but representative bodies, like plants, grow slowly. Its growth was to be measured not only by the resolutions which it adopted but also by the atmosphere which it created. The discussion and approval of the Schuman plan and of the European Payments union by the representatives of every parliament in western Europe marked the growth of a European political opinion. The same was true of the debates of a European army, during which the French and the Germans expressed their fears and their desire to work together with a frankness never previously displayed in an official public gathering. The council thus showed signs of

becoming a sounding board of European opinion. For that reason its 1950 session was followed more closely by the press than that of 1949.

For the time being there was a number of European bodies such as the O.E.E.C. and the committees set up by the signatories of the Brussels treaty to deal with defence, economic, social and cultural matters. Each of these bodies was controlled by a special *ad hoc* committee of ministers, who were responsible to their respective governments. The question was specifically raised whether the Council of Europe should be given the task of co-ordinating all these bodies through its committee of ministers, and whether the assembly should have the right to be consulted as to their activities. The future development of the Council would largely depend on the decisions taken upon this question during 1951. (H. Btr.)

COUNTRIES OF THE WORLD, AREAS AND POPULATIONS OF THE: *see* Areas and Populations of the Countries of the World.

COUNTRY LIFE. Those to whom rural England means the landscape of the southern counties, with its chalk downs, apple orchards and thatched cottages, may think it strange to hear that nowhere are the people more closely in touch with nature than in the industrial north. Yet the people of the north are never far from the country—many of the largest cities are on the edge of wild moorland, and the great heavy industries depend entirely on natural resources and spring directly from the rock on which they stand. The miner and the farmer work on the same land, the one below it and the other above; the sheep graze at the foot of the slag-banks; the corn grows beside the railway lines.

Here indeed, in the northwest, the small industrial towns still keep much of the character of a country village; and the children, though their fathers may work in mine or factory, are country children. In summer, perhaps, they conform to the pattern of childhood now laid down by the comic strips and the films, but in winter they revert to the manners and customs of the old Norse stock which has inhabited this part of England for a thousand years.

The early months of 1950 were a poor time for them: there was no snow and practically no frost, and they could not go foraging through the brown fields of February. It was a dark, muddy, clammy winter. Then in April the air grew dry, but there was no sun and no warmth, only a perpetual cold, dusty east wind. The hedges remained as bare as in January but the wild daffodils came and the primroses—for the town boys to gather in basket-loads and sell at the street doors.

The spring was held back like a greyhound in a trap: when it did break free, the hedges and trees shot into full leaf in a fortnight. It was still cold and dry, and crops were backward. The hay was only ankle-high at Whitsuntide; but with the warmth of June there came a good drop of rain, and the grass frothed up thick and long and plump. Hay-time used to be an anxious time in the northwest because we get so many wet Junes: if the hay was not gathered in by July it might have to wait until the harvest was gathered. But today there are grass-drying plants in many districts, so that the meadows can be cut green and wet in May and then perhaps again later in the year.

A minor event to celebrate in May was the partial removal of the ban on making cream: a visit to a farm now had the promise of an added pleasure, though it was not easy to find a farmer with any to sell. Vegetables, which had been very short in the spring, were now beginning to appear again; and the gardens, with rain coming just in time, were thriving and thrusting. About midsummer the pot seemed to boil over: everywhere there was a swirl and swish of grass and weed; in the new housing estates at the edge of nearly every town the bricklayers could scarcely build a wall as fast as the grass grew, and bricks lay in bright orange heaps in the green surf, with the foundations scooped out of the grass like the excavated ruins of an ancient city.

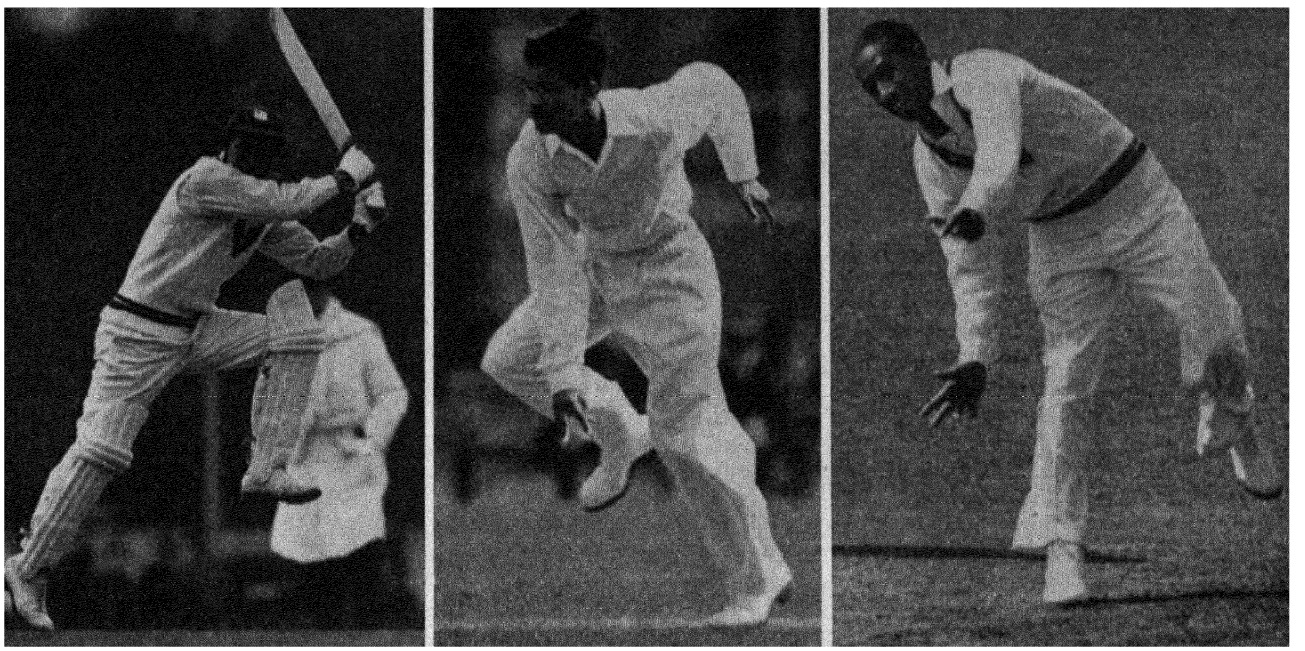
Then, at the end of June, the weather broke. We waited through a dripping, thundery July for it to improve in August. But in August it rained every single day. The holiday-makers who had come in thousands to the Lake district sat miserably in boarding houses, crawled from hotel to hotel in cars, or cycled along the almost empty roads wrapped in oilskin capes as big as portable tents. Watery blackberries hung unpicked on the hedges. Some farmers snatched in their crops between showers, hoping that they would at least be fit for fodder. Others waited for a fine September, but early in that month there was a weekend of heavy storm and northwest gales; and many crops were battered and bludgeoned till they lay on the ground, packed tight in curls and crisps like the coat of a rough-haired fox terrier.

In the south and the east of England the season was not so unfavourable, but in the northwest it was certainly the wettest summer for years, perhaps the wettest of this century. Yet by the autumn the farmers were already beginning to cut their losses and to prepare for another spring. Ploughing started again; and, because of orders from the Ministry of Agriculture, fields were ploughed up which had lain fallow for a lifetime. By November the disastrous season was almost forgotten, except in bank ledgers; and when the town boys lit their bonfires on Guy Fawkes night (which was celebrated in 1950 on Nov. 4 instead of Nov. 5 (a Sunday), the countryside returned once again to its old pagan ritual and rhythm. (*See* also Field Sports.) (N. N.)

CRICKET. In the winter of 1949-50 a visiting Australian team, captained by A. L. Hassett, proved altogether too strong for the South Africans, beating them in four out of the five tests (the other was drawn). Despite this inequality, the cricket attracted great crowds. For Australia, N. L. Harvey batted splendidly, averaging 132 with four centuries and a record aggregate of 660 in the test games; Hassett, A. R. Morris and a newcomer, J. A. R. Moroney, made many runs; and W. A. Johnston and I. Johnson were the most successful bowlers. A. D. Nourse and E. A B. Rowan batted well for South Africa.

A second Australian team, captained by W. A. Brown, visited New Zealand and asserted clear superiority in the five first-class matches played. The outstanding feature of this tour was the very accurate spin bowling of J. Iverson, who took 75 wickets for 7 runs each. In a domestic Australian season, naturally robbed of much interest by the absence of two touring teams, South Australia secured the Sheffield shield. For the first time in 15 years Wellington won the Plunket shield in New Zealand. A Commonwealth XI had a long and successful tour in India and Pakistan but lost the odd game of the three unofficial tests finished. The West Indian, F. M. Worrell, batted brilliantly throughout the tour; but his figures for the representative games of 684 runs and an average of 97 were nearly equalled by V. S. Hazare for India, whilst in D. G. Phadkar India could clearly claim the best all-rounder. The Australian G. Tribe, with 99 wickets, was the mainspring of the tourists' attack.

Naturally the main interest of the English season of 1950 centred round the visit of the West Indian team. Enough was known of their Indian tour of 1948-49 to leave little doubt as to their batting strength; and it was believed that the English batting, with its suspected vulnerability to pace, might be tested by their fast bowling, as in the past. In the event, however, the West Indian fast bowlers met with very



Three of the leading players of the victorious West Indian touring side in England, 1950. Left to right, Everton Weekes, who scored 2,310 runs for an average of 79·65; S. Ramadhin, who took 129 wickets with his leg- and off-breaks, and A. L. Valentine, a left-hand spin bowler who took 123 wickets.

modest success, and the burden of the attack was taken over and triumphantly sustained by two young bowlers of less than medium pace and with practically no previous experience of first class cricket: A. L. Valentine bowled left-handed on conventional lines and with remarkable accuracy, keeping the ball well up, turning it sharply when the pitch gave him help and always receiving splendid support from his field, especially from his captain J. D. Goddard at silly mid-off and from the slip fielding of G. E. Gomez and E. D. Weekes; and S. Ramadhin, "an original" and almost as accurate as Valentine, bowled his leg and off-breaks with a finger flick which made them extremely difficult to detect and with a trajectory that made it hard to "get at him" (above all he came off the pitch extremely fast). The bare statistics of these two bowlers indicate the extent to which they dominated the test games: in the four matches they together took 59 wickets at an over-all average cost of 21 apiece, bowling 367 maidens in a total of 800 overs, more than double the number bowled by all the other members of the side. Of the other bowlers Goddard had one fine spell in the last match at the Oval, and Worrell was a useful opener with the new ball; but the fast bowlers only took four test match wickets in all. It is no detraction from their astonishing achievement to say that the psychological approach and the technique of the English batting played into the hands of Valentine and Ramadhin, who were at no stage subjected to any really determined counter-attack nor indeed ever forced to station a straight long-field behind them.

In batting the West Indies could command an invaluable combination of soundness and aggression. The opening pair were generally A. F. Rae, a left-hander of unlimited patience and classical breadth and straightness of bat, and his partner J. V. Stollmeyer almost as sound in technique and more graceful in method. After these two would come "the three Ws": E. D. Weekes, with his compact strength and wide repertoire of strokes, had something of Bradman's ruthlessness; F. M. Worrell fascinated the expert and the ignorant alike by the consummate fluency and grace of his stroke-play; and C. L. Walcott's massive physique was the instrument of sound and at times very powerful technique.

The tourists' defeat by the M.C.C. at Lord's was rather unexpected; and their defeat by 202 runs in the first test at Manchester at the beginning of June, greatly disappointed them, which led moreover to some very short-sighted estimates of the strength of the two sides. The commendable desire of the Lancashire authorities had been to produce a pitch that would give the bowlers a fair chance; and this, when a period of almost tropical heat supervened, resulted in a wicket on which, from the first over, the ball turned and rose. In the opening two hours England lost 5 wickets for 88, but then T. E. Bailey (82) and T. G. Evans (104), aided by some inexperienced out-cricket and the breakdown of the fast bowler H. H. Johnson, added 161; and England totalled 312. The West Indians could never master R. Berry's accuracy and were 97 behind on the first innings. W. J. Edrich (71) was the chief contributor to England's second total of 288; and in the last innings only Stollmeyer, who played beautifully for 78, showed signs of mastering the spin bowling of Berry and W. E. Hollies.

A fortnight later, however, on a perfect wicket, the tourists won the next test match, their first played at Lord's, easily by 326 runs. A sound century by Rae and attractive batting of Weekes and Worrell threatened a very big first innings score, but R. O. Jenkins spun away persistently and the total of 326 did not appear unduly formidable. England were 62 for 0, but then Valentine and Ramadhin, abetted by some singularly spiritless and leaden-footed batting, took complete charge and 10 wickets fell for 89 runs. When, despite attractive stroke-play, 5 West Indian wickets were down for 190 in their second innings, the game still seemed alive; but Walcott (168 not out) and Gomez (70) added 211, and Goddard was able to declare before lunch on the fourth day. Only a fighting century by C. Washbrook and a promising innings by the young W. G. A. Parkhouse redeemed another series of batting failures. The accuracy and persistency of Valentine and Ramadhin's bowling achieved their collective record of 231 overs, 145 maidens and 18 wickets for 279 runs, which had never been surpassed in test match cricket.

The third test filled the Trent Bridge ground at Nottingham to capacity. Once again England, contending with a rather lively wicket and some accurate bowling by the quicker West Indian attack, made a deplorable start: 5 wickets were

lost for 25, and despite stouthearted play by their later batsmen the total of 223 was not far short of mediocrity. A good start by Rae and Stollmeyer on a pitch that had become perfect in texture was followed by the magnificent partnership of 293 of Worrell (261) and Weekes (129); and at the end of the third day the score read 521 for 3. An aggressive spell of bowling by A. V. Bedser summarily closed the innings for the addition of only 37; and when the opening pair, Washbrook (104) and R. T. Simpson (94), were still together with 212 on the board, England seemed to be fighting back. Late in the afternoon, with only 5 wickets lost for 408, there seemed a good chance of a draw. But once again Ramadhin took charge; and in the end the West Indies had but 105 runs to win, which their opening pair made peacefully and efficiently, without being parted.

For the last test match at the Oval England were at full strength: L. Hutton and D. C. S. Compton had recovered from injuries; and the selectors at last recognized the claims of D. V. P. Wright to be the most dangerous spin bowler available. But F. R. Brown, who had replaced N. W. D. Yardley as captain, lost the toss and with it England's last chance of avoiding defeat. Despite some classic bowling by Wright, who enjoyed no sort of luck, the West Indies moved steadily into security: Rae made 108 and Worrell, though far from well and hardly recognizable as the master of the Trent Bridge scene, 129; Gomez played excellently for 174 and Goddard had the satisfaction of playing his highest innings of the tour, 58 not out. The total was 503. At one moment on the third afternoon, with Hutton and Compton together and 229 on the board, there seemed a real chance of an English recovery, but a misunderstanding led to Compton's being run out. Even so, at the close of the third day England needed only 22 runs to save the follow-on and had 6 wickets to fall. But there was heavy rain in the night, and Hutton alone could find any sort of answer to Goddard's accurate bowling: when the last wicket fell with 9 runs still needed, he was still undefeated in an innings of 202, notable alike for the security of its defence and for the power and certainty of its cover-driving. The top was now off the wicket, and in the second innings England could make nothing of Valentine (6 for 39) or Ramadhin (3 for 38). The West Indians had both exposed the current weakness of English cricket and shown it the virtues of attacking stroke-play; and they had played with transparent enjoyment. Financially the tour exceeded all expectations; and it was felt that a meeting between the West Indies and Australia could not long be delayed.

In the domestic English season the highlight was a splendid Gentlemen *v.* Players match, watched by more people than had attended that fixture since W. G. Grace's jubilee game in 1898. In a match in which bat and ball were admirably balanced on a good wicket, the Gentlemen set the Players 253 to get in two and a half hours; and when time came, with the last batsmen in, only 11 runs were needed. The Gentlemen's captain, F. R. Brown, played a magnificently aggressive innings of 122; his rival captain, H. E. Dollery, went one better; and C. J. Knott did the hat trick in the last innings.

Not for many years could either university boast so strong a batting quartette as Cambridge in 1950: their captain, G. H. G. Doggart, J. G. Dewes and D. S. Sheppard all played for England in test matches; and P. B. H. May, like Sheppard a freshman, was little behind them in skill. Dewes and Sheppard, in an opening partnership, made 343 against the West Indies. In the university match Oxford did very well, thanks mainly to C. B. Van Ryneveld's spinners, to dismiss so strong a batting side for 200, but by lunchtime on the second day were themselves out for 31 runs less; rain then stopped play. On the third morning Cambridge, attempting

1950 COUNTY CHAMPIONSHIP FINAL PLACINGS

	P.	W.	L.	D.	T.	No. Dec.	First Innings lead in match: L.	D.	Pts.
Points Awarded	—	12	—	—	8 or 4	—	4	4	—
LANCASHIRE	28	16	2	10	0	0	1	6	220
SURREY	28	17	4	6	0	1	0	4	220
YORKSHIRE	28	14	2	10	0	2	0	8	200
WARWICKSHIRE	28	8	6	13	0	1	1	8	132
DERBYSHIRE	28	8	9	9	0	2	3	4	124
WORCESTERSHIRE	28	7	9	9	0	3	0	7	114
GLOUCESTERSHIRE	28	6	6	16	0	0	2	9	112
SOMERSET	28	8	8	10	0	2	1	3	112
KENT	28	6	12	8	1	1	3	5	108
NORTHAMPTONSHIRE	28	6	4	15	0	3	2	6	104
GLAMORGAN	28	6	4	9	0	9	0	7	100
HAMPSHIRE	28	7	9	9	1	2	0	2	96
SUSSEX	28	5	11	11	0	1	6	2	92
MIDDLESEX	28	5	12	8	0	3	2	4	84
NOTTINGHAMSHIRE	28	3	6	17	0	2	0	8	68
LEICESTERSHIRE	28	3	13	11	0	1	2	5	64
ESSEX	28	4	12	11	0	1	0	3	60

The Gloucestershire and Hampshire records include 8 points for win on first innings in match reduced to one day. Hampshire's record also includes 8 points for first-innings lead in match tied; Worcestershire's, 2 points for tie on first innings in match lost; and Kent's, 4 points for tie without first-innings lead.

to force the game, were at one time nearly in trouble but were eventually able to declare; and the game drifted to a draw. Oxford had two fine batsmen: their captain, D. B. Carr; and the South African M. B. Hoffmeyer, who made over 1,000 runs in the university season.

In county cricket, at the end of an interesting season, Surrey by a victory over Leicestershire in their last match caught Lancashire on the tape and dead-heated with them for the championship. If neither could be described as a great county XI, both were well-balanced sides. In a season that favoured spin bowling, Lancashire were well served by R. Tattersall and their two left-handers, M. J. Hilton and R. Berry, who were supported by splendid catching near the wicket; their batting was doggedly competent rather than alluring. For Surrey L. B. Fishlock batted finely, especially in the latter part of the season; and J. Laker, the mainstay of the attack, was supported by others of excellent variety. Yorkshire, with a young side, trod hard upon their heels; and Warwickshire, who finished fourth, was the only county to defeat the West Indians.

In school cricket Harrow had rather the better of Eton in a drawn match. M. R. Coulman of Winchester made 200 against Eton but the best school batsman was undoubtedly M. C. Cowdrey of Tonbridge, who for the public schools against the combined services made 126 not out and 55; he subsequently played for Kent.

At the end of the season an M.C.C. side under F. R. Brown sailed for Australia, and a Commonwealth team under L. E. G. Ames, of Kent, for India. Ames had made history this summer by being the first professional to serve on the Board of Control selection committee and in August he scored his hundredth 100 in first class cricket.

During the year the M.C.C., in response to a request from the counties, had initiated a national enquiry into the problem of how to bring more and better cricket into the lives of the young generation in England. A committee representing all interests, especially those concerned in education, issued a report in July. (H. S. A.)

CRIME. In 1949 the number of persons in England and Wales found guilty of offences of all kinds was 650,497, of whom 114,294 had committed indictable offences, 523,563 non-indictable offences and 12,640 offences against defence regulations, a decline of 15,090, 4,003 and 7,523 respectively against the figures for 1948. Traffic offences accounted again for 50·2% of the total. Of those found guilty of indictable

offences, 99,054 were males and 15,240 females. The age-distribution remained almost unchanged: 22% were under 14 years old, 13% between 14 and 17, 11% between 17 and 21, 23% between 21 and 30 and 31% over 30.

Indictable offences known to the police decreased from 522,684 in 1948 to 459,869. In the Metropolitan Police district the figure per 1,000 of the population went down from 15·1 to 12·6 (before World War II it had been between 10 and 11). The decline was largely confined to the various categories of theft and breakings, whereas the more sophisticated types of offences against property, such as receiving, frauds and false pretences, showed a considerable increase. Sexual offences also rose from 10,922 to 12,015, crimes of violence only slightly — from 5,183 to 5,235. In view of the alarm caused by a number of serious acts of violence committed by young people, which led to debates in the houses of parliament and demands for the re-introduction of corporal punishment (abolished by the Criminal Justice act, 1948), a special Home Office paper giving statistical information on the subject for the years 1946 to 1949 was published in May 1950. From this it appeared that the total of " floggable " crimes of robbery known to the police had declined from 978 in 1948 to 860 in 1949, and the number of persons found guilty of such acts from 448 to 414; but the numbers of offenders between 14 and 17 years of age and between 17 and 21 had risen slightly, from 44 to 50 and from 87 to 96 respectively. One hundred cases of murder, involving 114 persons aged one year and over, became known to the police. Sixty-one persons were arrested in 59 cases, involving 67 victims: 12 of them were found unfit to plead, 12 guilty but insane and 1 insane after conviction and 17 were executed; 34 committed suicide.

In 1949, two royal commissions were set up to enquire into specific aspects of crime: on capital punishment and on betting, lotteries and gaming. The terms of reference of the former were " to consider and report whether liability under the criminal law in Great Britain to suffer Capital Punishment for murder should be limited or modified, and, if so, to what extent and by what means, for how long and under what conditions persons who would otherwise have been liable to suffer capital punishment should be detained, and what changes in the existing law and the prison system would be required; and to inquire into, and take account of, the position in those countries whose experience and practice may throw light on these questions."

In Scotland the total of persons convicted or found guilty in 1949 was 92,778, of whom 90·9% were males. The highest incidence was in the 17-20 age group for males and in the 30-39 age group for females. The total number of crimes and offences known to the police was 162,498, a decrease of 9,631 or 5·6% against the total for 1948; 60% of them were committed in the four counties of cities, which together included only 37·7% of the total population. Sentences of imprisonment went down by 649. Fourteen cases of murder became known to the police; but of eight persons proceeded against, seven were acquitted and one was found insane and unfit for trial. The percentage of crimes and offences cleared up was 72·4, as against 68·9 in 1948. The whole Scottish prison system was carefully surveyed in a report by the Scottish Advisory Council on the Treatment and Rehabilitation of Offenders.

Europe. In France the total number of cases dealt with declined from 720,461 in 1948 to 670,962 in 1949, but the percentage of arrests increased from 47 to 58. Crimes against life went up from 9,138 to 14,969, sexual offences from 6,557 to 8,094; but thefts remained stationary, and offences against police regulations of an economic character decreased from 18,919 to 11,585.

In Austria the total number of cases brought to the notice of the police declined from 301,103 in 1948 to 221,097 in 1949. The decline was particularly noticeable for murder and manslaughter (155 as against 227) and for crimes against property (53,485 as against 82,619), whereas sexual offences increased (from 2,060 to 2,691).

In Italy too there was a decline in the number of cases brought to the notice of the police (1,281,408 in 1949 as against 1,357,193 in 1948) for all categories of crime except sexual offences, which increased from 6,760 to 7,377.

In Switzerland the figures available for the whole country referred only to the number of persons found guilty. There was a slight decline in the total from 18,672 in 1948 to 18,296 in 1949 for practically all categories except sexual offences, which increased from 1,772 to 1,818. (H. Mm.)

United States. Crime in 1950 continued the upward course recorded in 1949. The net increase in cities was not large, but in rural areas the sharp upswing of 1949 continued into 1950 at an undiminished pace. A big increase of negligent manslaughter in the cities was mainly due to road traffic accidents. The estimated national total of major crimes and larcenies in 1949 was 1,763,000, an increase of 77,000 over 1948. An average day in 1949 produced almost 300 homicides or felonious assaults, 162 robberies, 1,100 burglaries, almost 450 motor car thefts and some 2,800 larcenies. In 346 cities with more than 25,000 population (total population 37,480,000) the value of property stolen in 1949 totalled more than $108 million.

CRIME IN UNITED STATES, JAN.-JUNE 1950

	Rate per 100,000 population		Percentage change from Jan.-June 1949	
	Cities	Rural areas	Cities	Rural areas
Murder and non-negligent manslaughter	2·76	2·83	−1·1	+1·6
Negligent manslaughter	1·77	2·27	+19·8	−3·7
Rape	6·03	6·00	−4·6	+4·8
Robbery	30·0	10·1	−3·8	+3·4
Aggravated assault	39·4	18·6	+ ·4	+4·7
Burglary	211·5	92·2	+1·9	+14·9
Larceny	499·1	113·3	+2·2	+5·6
Motor car theft	83·8	23·1	+3·2	−3·9
All crimes listed			+1·9	+7·4

Among the nine geographic divisions, the south Atlantic and south central cities led in murders and in assaults with lethal weapons, this largely because of racial distribution. The Pacific coast on the other hand was consistently highest for all property crimes. The New England and middle Atlantic cities divided honours for the lowest rates.

During the first six months of 1950, the Federal Bureau of Investigation filed identification records of 402,383 individuals taken into custody throughout the country. The peak age of such arrests was 21 years, followed by those who were 22, 23, 19 and 20 years of age. Women represented 9·4% of the total. Whites arrested numbered 293,298 and Negroes 103,677. (*See* also JUVENILE DELINQUENCY.) (BR. S.)

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CRIPPS, SIR (RICHARD) STAFFORD,

British statesman and lawyer (b. London, April 24, 1889), was educated at Winchester and University college, London, and was admitted to the bar in 1913. He was knighted and appointed solicitor general in the Labour government in 1930,

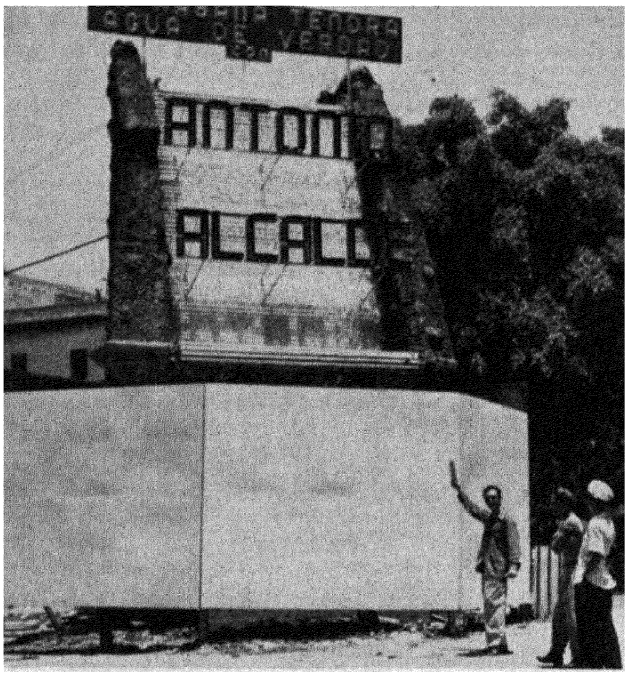
and in 1931 was elected Labour M.P. for Bristol East. In Jan. 1939 Sir Stafford was expelled from the Labour party for attempting to create a popular front. In 1940 Winston Churchill appointed him ambassador to Moscow, where he concluded the Anglo-Soviet pact. In 1942 he was lord privy seal and went to India to work out the terms for that country's independence. He was minister of aircraft production from November of that year and on Feb. 28, 1945, was re-admitted to the Labour party. In the Labour government he was president of the Board of Trade, July 1945-Sept. 1947, and minister for economic affairs, Sept. 29 to Nov. 13, when, upon the sudden resignation of Hugh Dalton, he became chancellor of the exchequer. In Jan. 1950 he attended the O.E.E.C. consultative group meeting in Paris and signed a declaration of economic co-operation with the Scandinavian countries. In the general election of Feb. 23, 1950, Sir Stafford was returned as member for South-East Bristol and on Feb. 28 was re-appointed chancellor of the exchequer. In January and March he conferred with the Trade Union congress economic committee. In March he attended meetings of the Atlantic treaty defence financial and economic committee. In May he conferred with the trade union group of M.P.s and later visited France for a fortnight's holiday at Briançon, French Alps, at the invitation of Maurice Petsche, French minister of finance. Sir Stafford Cripps's health had been causing anxiety for some time and he was on sick leave from early August. On Oct. 19 it was announced that the King had accepted his resignation; he later applied for the Chiltern Hundreds. Hugh Todd Naylor Gaitskell (*q.v.*) was appointed to succeed him as chancellor of the exchequer. In early December it was stated that the tubercular spinal infection for which Sir Stafford was being treated in Switzerland would keep him in bed for six months. On Jan. 1, 1951, he was made a Companion of Honour.

CUBA. Island republic in the Caribbean sea, including the island of Cuba, the Isle of Pines, and other minor islands and keys. Area of the main island: 44,217 sq.mi. (Isle of Pines, 1,180 sq.mi.). Pop.: (1943 census) 4,778,583, (mid.-1950 est.) 5,400,000. Racial distribution is officially calculated at 75% white (about one-third of this group is mulatto), 24% Negro and 1% Asiatic (largely Chinese). An estimated 200,000 Spaniards live in Cuba. Language: Spanish. Religion: predominantly Roman Catholic. Havana (pop., 1949 est., 800,000) is the capital and chief port. Other chief towns (pop., 1946 est.): Santiago de Cuba (152,000); Camagüey (87,000); Pinar del Rio (64,000); Matanzas (55,000). President of the republic, Dr. Carlos Prío Socarrás.

History. In domestic affairs, Cuba went through 1950 on a basis of expanding activity, full employment and rising demand for its principal product, sugar. By the end of the sugar-producing season (June 14) the output attained 6,126,000 tons, the third largest crop on record. The public leaders, as well as farmers, sugar refiners and labour leaders seemed all to agree in 1950 as to the need of a new agreement, embracing the regulation of production and marketing as well as of price movement.

The projected foreign loan of 200 million pesos, proposed in 1949, encountered much opposition, and the constitutionality of the legislation was challenged in the Supreme Court. Negotiations with the International Bank for Reconstruction and Development were carried on during the year. Meanwhile, a public works programme was launched under an internal loan of $45 million, and some road-construction contracts were let in the autumn. Government revenue for the fiscal year ending June 30, amounted to $301 million.

The National Bank of Cuba, created in 1949, began formal operation in April as the central bank, and shortly after as the national clearing-house for all banks in the republic. In August its first statement disclosed that it had assumed responsibility for about $37 million of treasury demand notes issued in 1947, in part for the purpose of paying the Cuban share in the capital of the International bank. Prices of consumer goods continued to rise, and wages and other costs followed. The expansion of the capital and large provincial cities could not take place sufficiently rapidly to provide adequate housing, in spite of great building activity.



A political sign consisting of a waterfall used by a candidate who promised improved water supplies, seen during mayoral elections in Havana, Cuba, 1950.

Cuban-Dominican tension subsided in 1950. When the Nationalist outbreak occurred in Puerto Rico, some pro-Soviet members of congress proposed resolutions advocating Puerto Rico's independence from the U.S. (C. McG.)

Education. In 1944-45 there were 498,286 children in attendance at public schools and 72,000 at private schools. There were 21 institutes for advanced education. There was also the University of Havana.

Agriculture. Sugar cane is by far the most important crop. Production in 1949-50 amounted to 6,126,000 short tons (1948-49: 5,763,500 tons). Production of blackstrap molasses totalled 265 million gal. Production of other crops in 1949 included ('000 short tons): leaf tobacco 30; coffee 30·5; henequen fibre 17·5; pineapples 138·5; rice (milled) 42·5. The livestock census of July 1, 1946, showed 4,136,000 cattle, 1,338,000 pigs, 154,000 sheep and 141,000 goats.

Industry. There were in 1950 approximately 160 sugar mills scattered throughout the island. Industrial production in 1949 included 514,254,000 cigars and 7,808 million cigarettes. Refractory chromite was the most important mineral in volume of output; 92,287 long tons were produced in 1949. Other minerals included (long tons): copper concentrate 53,489; chemical manganese ore 10,982; metallurgical manganese ore 50,534.

Foreign Trade. Exports in 1949 amounted to $578,306,696; imports were $451,390,279. The chief exports were sugar and molasses (88%) and tobacco and products (4%). The U.S. supplied 83% of the imports. Leading customers were the U.S. (64%), the U.K. (12%) and Germany (5%).

Transport and Communications. Cuba in 1949 had 3,017 mi. of public railways; in addition, there was a total of 7,870 mi. of industrial trackage. Roads on Jan. 1, 1949, included 1,720 mi. of paved highways and 600 mi. of improved highways. Licensed motor vehicles (Dec. 31, 1948): cars 40,878, lorries 24,634, buses 4,118. Merchant marine (June 1949): 34 steamers and motorships (100 tons and over) aggregating 36,135 gross tons. Telephones (Dec. 31, 1948): 93,426.

Finance. The monetary unit is the *peso*, officially pegged at par with the U.S. dollar. National debt (Dec. 31, 1949) $105·8 million, of which $73·9 million was foreign. . Notes in circulation incl. U.S. currency (March 31, 1950): $722 million; gold reserve $299 million. (J. W. Mw.)

CURAÇAO: *see* NETHERLANDS OVERSEAS TERRITORIES.

CYCLING. The year 1950 was notable for the retention by R. H. Harris (*q.v.*; Great Britain) of the world professional sprint championship and for the speeds recorded in long-distance events in Great Britain.

The world track championships were held at Liége, Belgium. In addition to Harris's victory one other championship went to the Commonwealth: S. Patterson (Australia), who had won the amateur sprint in 1949 at Copenhagen, won the amateur pursuit. H. Verdeun (France) won the amateur sprint; A. Bevilacqua (Italy) the professional pursuit; and Raoul Lesueur (France), for the second time in three years, the motor-paced pursuit. The amateur road race was won by Jack Hoobin (Australia); the professional by A. Schotte (Belgium), who had held the title in 1948.

In Britain the time trial records for 100 mi., 12 hr. and 24 hr. were broken. For the second successive year K. H. Joy won the best all-rounder contest: his average speed for events at 50 mi., 100 mi. and 12 hr. was 23·330 m.p.h., a record for the competition. Joy's club, Medway Wheelers, were the team champions for the third successive time. In addition Joy broke the 100 mi. record twice and won the championship events at 100 mi. and 12 hr. The 100 mi. record, after being broken many times in 1950, was finally held by L. V. Willmott (Midland C. and A.C.) in 4 hr. 12 min. 22 sec. The 25 mi. champion was G. F. Fell (Becontree Wheelers), who had won in 1949 also. A. R. J. Hill (Kentish Wheelers), who finished 4th in the best all-rounder contest, broke the 12 hr. record when he completed 259¼ mi. (7⅜ mi. more than the previous record). Hill also established a new London-to-Brighton and back record in 4 hr. 32 min. 19 sec. R. F. Mynott (North Road R.C.) set up a new 24 hr. record of 460½ mi.

The best all-rounder competition for ladies was won for the second year in succession by Eileen Sheridan (Coventry C.C.). Her average speed over 25 mi., 50 mi. and 100 mi. was 22·134 m.p.h.

A. Bannister (Manchester Wheelers) was again British sprint champion. His team mates R. A. Geldard and C. Cartwright won the 25 mi. track championship and the 4,000 m. pursuit respectively. G. W. Thomas (Yorkshire R.C.) won the national massed-start championship over a course of 80¾ mi. in the Isle of Man.

On the continent Ferdinand Kubler (Switzerland) won the Giro d'Italia and later the 3,000 mi. Tour de France. Fausto Coppi (Italy) the outstanding rider in 1949, crashed in the Giro d'Italia and was seriously injured. The Italian Gino Bartali was leading in the Tour de France when French supporters in the Pyrenees showed, it was thought, unnecessary partisanship against the Italian riders, who thereupon all withdrew from the race. L. De Ryck (Belgium) won the tour of Luxembourg, H. Lakeman (Netherlands) that of the Netherlands and Albert Dubuisson (Belgium) that of Belgium. (*See* also EMPIRE GAMES.)

CYPRUS. British colony. An island in the eastern Mediterranean. Area: 3,572 sq.mi. Pop. (1946 census): 450,114. Language: Greek 361,373 (80·3%), Turkish 80,361 (17·8%); English is spoken by about 10%. Religion: Greek Orthodox 80·4%, Moslem 17·9%. Chief towns: Nicosia (cap., 34,463); Larnaca (14,746); Limassol (22,693); Famagusta (15,912). Administration: governor; executive council, 4 official and 2 (incl. 1 Moslem) unofficial members. Governor, Sir Andrew Wright.

History. The *enosis* movement for union with Greece again filled the political stage during 1950, being supported both by the authorities of the Greek Orthodox Church in the island and by the political left. An unofficial plebiscite was organized by the church in January, and during the summer both *enosis* parties sent delegations abroad. That of the left travelled in the Communist states and naturally received a warm welcome. That of the right visited Greece and the United Kingdom and was in New York during the meeting of the United Nations general assembly. The Turkish population of the island remained opposed to union with Greece and continued to support the British connection, sending counter-appeals to the United Nations to this effect. Disturbances took place in Limassol on June 5 after six Communist councillors had been imprisoned for contempt of court. The attitude of the British government remained that the issue of *enosis* was closed. (*See* also GREECE.)

Of greater practical effect were the measures taken by the government to promote the health and prosperity of the people. It was announced at the beginning of the year that the malaria-eradication campaign could now be regarded as completely successful. This campaign, begun in 1946, was directed at all mosquito-breeding areas on the island and in three years the number of cases of malaria was reduced from about 18,000 to less than 100 in 1949; none of these hundred cases was a new infection. The cost of the campaign was £300,000, or 13*s.* a head of the population. In March the government contracted for the construction of a new power station at Dekhelia to cost £182,962 as the first instalment of a project to supply electric power to almost the whole island, and in May it was announced that a colonial development grant of £46,000 had been made for a geological and geophysical survey of the colony. In his budget speech in March the governor said that Cyprus had reduced her adverse trade balance from £9,700,000 in 1948 to less than £3 million in 1949. A further reduction of over £700,000 followed in the first half of 1950. A profitable and expanding export was forest seed, of which 18 tons were sent, mostly to the middle east, during the year. There were 611 co-operative societies with a membership of 98,485. An archaeological expedition, financed by the Ashmolean museum and Sydney university arrived in August to investigate an Iron Age site near Myrtou.

Finance and Trade. Currency: Cyprus pound of 180 piastres (£C 1 = £1 sterling). Budget (est. 1950): revenue £4,225,610; expenditure £4,053,062. Foreign trade (1949): imports £11,026,971; exports, incl. re-exports, £8,243,353. Principal exports: cuprous concentrates, iron pyrites, asbestos, wine and agricultural produce. (K. G. B.)

CYRENAICA: *see* LIBYA.

CZECHOSLOVAKIA. People's republic of central Europe, bounded W. and N.W. by Germany, N. and N.E. by Poland, E. by the U.S.S.R. S. by Hungary and Austria. Area: (before Sept. 28, 1938) 54,244 sq.mi.; after annexation of Subcarpathian Ruthenia by the U.S.S.R. (June 29, 1945), 49,330 sq.mi. Pop.: (1937 est.) 15,239,000, (1947 census) 12,164,095, (Dec. 31, 1949 est.) 12,536,000. Language: official 1948 est.) Czech 67%, Slovak 25%, German 3·5%, Hungarian 3·5%, Polish 0·7%. Religion: (1930 census) Roman Catholic 77%, Protestant (all denominations) 7·5%, Czechoslovak Church 5·6%, Greek Catholic 1·6%, Jewish 1·9%, atheist 6%. Chief towns: (pop., 1947 census) Prague (cap., 921,416); Brno (272,760); Moravska Ostrava (181,181); Bratislava (172,664); Plzeň (118,152). President of the republic, Klement Gottwald; prime minister, Antonin Zápotocký.

History. The first important purge in the Czechoslovak Communist party was the expulsion of Vilem Nový, former editor of the party's newspaper, from the central committee of the party and from the party itself. It was announced on Feb. 28, 1950, that during 1939, when organizing relief for Czechoslovak Communists escaping from German occupation into Poland, he had come under the influence of a "foreign agent," whom he had later introduced into party circles in Czechoslovakia after 1945 and so enabled him to pursue his espionage activities. The "foreign agent" appeared from

later statements to be an American welfare worker named Noel Field.

The Slovak Communist party held a congress at the end of May. The main theme of the discussions was the sin of nationalism, of which prominent Slovak Communists had proved guilty. These included the premier of the Slovak regional government, K. Husak, the regional commissioner of justice, Laco Novoměsky, the former chairman of the Slovak party, Karel Šmidke, and the former foreign minister of the republic, Vlado Clementis. According to vice-premier and foreign minister Vilem Široky, Novoměsky had tolerated nationalism in Slovak schools, where " liberalism was making itself felt." Education had been left in the hands of " outspoken enemies of the Republic." As for Clementis, his most serious crime was that " in 1939, after the conclusion of the Soviet-German pact, which had such great importance for progressive mankind because it marred the base and treacherous plans of the Anglo-American (sic) imperialists, he stood up against the Soviet Union, he took up the position of a class enemy." His impious attitude persisted during the Finnish-Soviet war and the " liberation of western Ukraine and western White Russia." At the congress all four heretics appeared and abased themselves. Husak and Novoměsky were accepted as penitents, but the " self-criticism " of Šmidke and Clementis was rejected. In the words of Široky, " for a Communist there is a rule which must be observed at all times, and especially in difficult circumstances—unreserved confidence in the Soviet Union and the great Stalin." Clementis should have " borne in mind that the Soviet Union and comrade Stalin at all times and in all circumstances conduct a policy designed to one end alone—the good of the international working-class movement and the fight against imperialism." The obdurate heretics were handed over to the secular arm, and nothing more was reported on their fate.

Spy trials continued to flourish during 1950. In the first five months of the year there were six, involving accusations of espionage for the United States, Great Britain and the Netherlands. The most important was concluded on May 31. The chief accused, the former member of parliament and prominent figure in the Czech Socialist party Mme. Milada Hořakova, was hanged. The authorities paid special attention to the police and army. On May 23 a new Ministry of National Security was set up, distinct from the Ministry of the Interior. It was entrusted to the Communist Ladislav Kopřiva. In June an order of the defence minister Alexěj Čepička gave greater powers to the political commissars and urged greater activity by the branches of the Communist party and of the Youth organization within the army.

Official spokesmen continued to complain of insufficient efforts by the industrial workers. At a meeting of the Miners' union in Moravska Ostrava on Sept. 8, Premier Antonin Zápotocký stated that prewar a miner's average hourly output of coal had been 213 kg., and was now only 175. While wages had risen six times, the price was only three times higher. The premier declared, " Productivity of work in the mines must be higher than capitalist productivity. Miners should feel ashamed not to achieve this."

Collectivization of agriculture had not gone so far in Czechoslovakia as in other countries of eastern Europe. There were three forms of " unified agricultural co-operative " in the republic. The most widespread was one in which members shared agricultural machinery but farmed their own holdings independently. At the end of Feb. 1950 there were 2,400 of these in the country, with 110,000 members. Preparatory committees existed, to prepare such co-operatives, in a further 1,300 villages. The second type of co-operative provided for joint harvesting, but the crop was distributed according to the acreage held by each member. The third type was one in which the crop was distributed mainly according to the labour of the members, but some account was also taken of the size of the holdings which members brought with them into the co-operative. Of this last type, which resembled that which was being rapidly developed in Bulgaria and Hungary, there were only 30 in Czechoslovakia in the first months of 1950. The slow rate of collectivization in Czechoslovakia could be explained partly by the comparative prosperity of the peasants, especially in the Czech lands. There was not much land shortage, methods of cultivation were comparatively good and peasants could do well from individual small and medium holdings. There was no destitute rural proletariat. In such conditions peasants were not eager to join collective farms and strongly opposed them. The government did not wish to antagonize the whole peasantry and so was going slowly. Another reason was that, as industry was already well developed and the skilled working class numerous, industrial planning did not require such a large and rapid increase in the unskilled labour force.

Cultural relations with the west were further diminished when the Czechoslovak government closed the British Information service and the British Council in March. Among the reasons given to justify this action were the facts that the B.B.C. employed Czech exiles, that London and Glasgow universities had appointed Czech émigrés to lectureships in Czech language and literature without previously consulting the Prague government, and that a former employee of the British Council in Prague had " revealed " that the council was a centre of anti-government activities. Meanwhile the progress of Czechoslovak culture under the new regime was indicated by the fact that the number of books of " political literature " published in Czechoslovakia increased from 6 million in 1948 to 23 million in 1949.

In the conflict with the Catholic Church there was no change in policy. The government's efforts to organize a group of collaborationist clergy, to denounce the reactionary aims of the Vatican and the hierarchy, continued. The archbishop of Prague, Josef Beran, remained confined to his palace. On April 18 the government took over monastery buildings throughout the republic, on the grounds of housing shortage, and concentrated all monks in a few selected buildings.

In foreign policy, the Moscow-sponsored rapprochement with Eastern Germany continued. On June 21 a German delegation led by the Communist leader Walter Ulbricht (*q.v.*) visited Prague and signed a declaration accepting the present western frontiers of Czechoslovakia as definitely binding on the German people. Among other features of Czechoslovakia's foreign relations may be mentioned the propaganda campaign started in July which accused the United States of dropping Colorado beetles from aircraft over Czechoslovak territory. (H. S.-W.)

Education. Schools (1948): elementary 12,019, pupils 1,059,010; higher grade 2,280, pupils 463,295; secondary 292, pupils 70,440; vocational 1,243, pupils 91,160; universities 7, students 31,769; institutions of higher education 10, students 23,127.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 1,573 (1,590); rye 1,339 (1,250); barley 1,116; oats 1,107; maize 231; potatoes 6,263; sugar, raw value, 627; grapes 60. Livestock ('000 head, Jan. 1949): cattle 3,663; pigs 3,242; sheep 459; horses 640; chickens 13,737. Food production ('000 metric tons, 1948; 1949 in brackets): milk 2,258 (2,618); butter 22·8 (30·0); cheese 13·9 (13·0); meat 264·0 (294·0) of which beef 118·8 (104·4).

Industry. Persons employed in manufacturing industries (Nov. 1949) 1,477,700. Fuel and power (1949): coal ('000 metric tons) 17,004; lignite ('000 metric tons) 26,520; manufactured gas (million cu. metres) 2,189; electricity (million kwh.) 8,268. Raw materials ('000 metric tons, 1949): pig iron 1,875; steel ingots and castings 2,745. Manufactured goods (1949): cotton piece goods (million metres) 318·0; cotton yarn ('000 metric tons) 75·8; wool yarn 35·4; rayon filament yarn 5·5; rayon staple fibre 20·5; sheet glass 135·5; cement 1,740. Production of motor vehicles (1948; 1949, six months, in brackets): 25,200 (14,160).

Foreign Trade. (Million korunas, 1949; 1950, six months, in brackets) import 39,399 (16,744); export 40,308 (17,175).

Transport and Communications. Roads (Dec. 1946): 43,969 mi. Licensed motor vehicles (Dec. 1949): cars 161,000; commercial 63,000. Railways (1947): 8,161 mi.; passenger-mi. (six months 1949) 5,502 million; freight net ton-mi. (six months 1949) 4,401 million. Air transport (1949): flights 16,833; mi. flown 4,884,000; passenger-mi. 40,931,000; freight net ton-mi. 2,598,000. Telephones (1948): 350,708. Wireless licences (Aug. 1949) 2,229,000.

Finance and Banking. (Million korunas) budget: (1949 est.) revenue 89,320, expenditure 89,278; (1950 est.) revenue 131,930, expenditure 131,556. National debt (Sept. 1948; Sept. 1949 in brackets) 121,882 (116,177). Currency circulation (March 1949; March 1950 in brackets): 70,900 (72,000). Bank deposits (Jan. 1949; Jan. 1950 in brackets): 58,700 (146,000). Monetary unit: *koruna* with an official exchange rate of Kč. 140 to the pound and Kč. 50·15 to the U.S. dollar.

See O. Friedman, *The Break-up of Czech Democracy* (London 1950).

DAHOMEY: *see* FRENCH WEST AFRICA.

DAIRY FARMING. The steady increase in numbers of milk cows in the United Kingdom continued in 1950. The population of cows and heifers in milk increased by 3% from 3,049,000 head in June 1949 to 3,138,000 in June 1950; the net increase in numbers of cows in milk and dry was 74,000 head (2%). The numbers of heifers in calf, from which dairy herd replacements are drawn, decreased from 911,000 to 858,000 head (6%) in the same period. Unduly young cows are often sold for slaughter because of disease or poor milk-yield; so that it was expected that the numbers of replacements required would grow less as management practices improved. But some parts of the decrease may have been due to a slackening in the rate of the industry's expansion.

The year was, on the whole, a good one for milk production, though many farmers, especially in the western parts of the country, had a very bad hay and corn harvest and entered the 1950-51 winter with a poor fodder supply. The quantity of milk sold between Oct. 1949 and Sept. 1950 was some 1,860 million gal., an increase of about 9% on the 1,715 million gal. of 1948-49. The 1949-50 level of sales was about 43% above prewar levels. Restrictions on the retail sale of liquid milk were removed in Jan. 1950; and the level of sales by farmers encouraged the hope that restrictions would not need to be re-imposed. The average price of milk to producers was 30·8*d.* per gallon in 1948-49 and 33·1*d.* per gallon plus certain special allowances favouring small producers in 1940-50. During the year minimum prices for 1952-53 and 1953-54 were fixed at 24*d.* and 22*d.* per gallon respectively.

The expansion in milk production and the apparent disinclination of consumers to consume much more liquid milk intensified farmers' anxiety about their market: in particular they pressed for the re-opening of the higher-priced outlets for milk surplus to liquid consumption; *e.g.*, fresh cream and the manufacture of chocolate and ice cream.

The Ministry of Agriculture aimed to eliminate tuberculosis entirely from all dairy and beef cattle over certain specified areas and eventually over the whole country. A revised Attested Herds scheme, including bonuses for owners of attested herds, came into operation on Oct. 1, 1950. At the same time free testing of cattle was instituted in two areas in southwestern Scotland and southwestern Wales; and from 1952 onwards all cattle not free from tuberculosis in specified parts of these areas were to be slaughtered. About 21% of the cattle in Great Britain were in attested herds in mid-1950. (K. E. H.)

United States. Production of milk on farms in the U.S. in 1950 was estimated at slightly more than the 119,136 million lb. produced in 1949, as compared with a record production of 121,504 million lb. in 1945. This provided for a total civilian milk consumption (in all forms) per person of 763 lb., compared with 801 lb. per person as an average for 1935-39 and 760 lb. in 1949. Of the total, 390 lb. were used as liquid milk and cream. The output of milk per cow again set a new record, 5,310 lb. in 1950, as compared with 5,239 lb. in 1949 and a pre-World War II average of only 4,403 lb. The number of milk cows on farms at the beginning of the year was 24,625,000, compared with 24,416,000 in 1949.

Stocks of dairy products rose to record levels. Consumption of butter remained about the same as in 1949, but the 10·5 lb. used per capita was only 63% as much as pre-World War II. Meanwhile, production of butter in the U.S. in 1950 was estimated at more than 1,600 million lb., as compared with nearly 1,700 million lb. in 1949 and 2,170 million lb. annually before World War II. Much of the butter output was accumulated in storage in carrying out the price support provisions of the Agriculture act. Storage stocks of butter on Nov. 30 were 159,297,000 lb., as compared with 130,452,000 lb. in 1949. The U.S. production of cheese in 1950 was estimated at 1,190 million lb., almost the same as the 1,193 million lb. in 1949. Production per capita was 7·8 lb. in 1950, but consumption was estimated at only 7·1 lb. per capita. The 1950 production of ice cream was estimated to have used 6,320 million lb. of milk, or 41·4 lb. per person. U.S. exports of cheese and condensed and evaporated milk in 1949-50 dropped sharply but exports of dried milk increased slightly. (J. K. R.)

DANCE. The main feature of 1950 in ballet was the interchange between Great Britain and the United States not only of companies but also of choreographers. This was expected to be of the greatest value to the art. The U.S. saw the return of the Sadler's Wells ballet and England saw some 30 new American ballets in what was a non-stop season; yet there were no signs of diminishing popularity. On the contrary a new company, the Festival ballet associated with the names of Alicia Markova and Anton Dolin, gave its London première at the Stoll theatre on Oct. 24 and played to good houses for an extended run. This meant that there were now five companies in England, three major companies in the U.S., the large touring company of the Marquis de Cuevas and two in France, apart from the companies in Scandinavia, the U.S.S.R. and the dominions that had not yet made extensive tours.

The Sadler's Wells ballet produced three important new works at Covent Garden. The first (on Feb. 20) was *Don Quixote* with choreography by Ninette de Valois, music by Roberto Gerhardt and scenery and costumes by Edward Burra. This was an episodic work revealing Quixote's character in a number of scenes of what might by analogy be called " recitative " dancing. While not directly Spanish in idiom it caught to perfection the atmosphere of the great Spanish classic. The second creation, *Ballabile*, (produced on May 5) was by the French choreographer Roland Petit to Constant Lambert's arrangement of music by Emmanuel Chabrier and with a superb decor by the Spanish artist Antoni Clavé. This work was light and witty in places but its choreography was not on a level with the music or decor. The third creation, or rather re-creation for it had previously been given in the U.S., was George Balanchine's *Ballet Imperial* (produced on April 5) danced to Tchaikovsky's *Piano Concerto no. 2* and with a new setting and costumes by Eugene Berman. This was a work in a neo-classical idiom in which the choreographer had sought to recapture the essence of Imperial Russian ballet. It was beyond question a creation of great technical brilliance. Judgment of this work, as of all Balanchine's neo-classical works to existing music, can depend only on individual feeling about the music and the use that was made of it. It undoubtedly revealed and extended the dancers. The same choreographer also contributed a ballet to the Sadler's Wells Theatre ballet, *Trumpet Concerto*, to the music of Haydn with decor and costumes by V. Kernot. This too had no story but suggested the atmosphere

of military manoeuvres in some toy state of the 19th-century. It was a perfect vehicle for the young talent for which it was designed. As usual the Sadler's Wells ballet concentrated on its productions of the classical ballets. Margot Fonteyn continued to increase in stature as a ballerina. The company left for its second American tour in September.

On March 28 the Sadler's Wells Theatre ballet produced *Summer Interlude*, a first ballet by an experienced dancer Michael Somes to music by Ottorino Respighi and costumes and decor by Sophie Fedorovitch. It was musical and had considerable charm though it was rather too long for its slender content. The Sadler's Wells ballets celebrated their 21st anniversary at Sadler's Wells theatre on May 15 in the presence of Princess Margaret. A packed house paid tribute to Ninette de Valois, who returned for one performance to dance in Frederick Ashton's *Wedding Bouquet*.

The International ballet added to its repertoire a revival of Léonide Massine's *Gaîté Parisienne*, a witty frolic to the music of Jacques Offenbach, and a new ballet *Visions* by a Swedish choreographer J. Algo. This last failed in its interpretation of music by M. P. Moussorgsky.

Marie Rambert's ballet visited Paris as well as giving two London seasons. David Paltenghi made his choreographic debut with *The Eve of St. Agnes* to music by César Franck (arranged by Geoffrey Corbett) and costumes and decor by Roger Furse. While the attempt to reconcile ballet classicism and mediaevalism could not be a complete success the work showed great promise. It was followed by the same choreographer's *Prismatic Variations*, but once again the handicap of using already existing music, Beethoven's *Variations on a Theme by Diabelli*, was seen.

Two U.S. companies, the New York City ballet and the American National Ballet Theatre, visited Europe in quick succession. They revealed not only great choreographic wealth but two totally opposite theories: the one represented by the new classical dance interpretations of George Balanchine, the other by Agnes de Mille's dance dramas.

The New York City ballet, a comparatively new company, was dominated by Balanchine's artistic personality. The bulk of its repertoire consisted of the neo-classical ballets, rich in pattern and invention but somewhat aridly presented. The success of his first tour was earned by two dramatic ballets, *Orpheus* (with music by Igor Stravinsky, decor and costumes Isamu Noguchi) and a revival of the late Diaghilev masterpiece *Le Fils Prodigue* (with music by Serghey Prokofiev and decor and costumes by Georges Rouault). If this could not be construed as clearly demonstrating the public's preference for a subject, it did at any rate underline the importance of a score specially composed for ballet. The year gave a very clear warning of the danger of omitting the contemporary composer from ballet creation. Two Englishmen contributed ballets to the American repertoire; both failed to reach complete success through the use of music composed for a different purpose. Frederick Ashton in *Les Illuminations* attempted an interpretation of Arthur Rimbaud's poems to the music with vocal score by Benjamin Britten and with costumes and decors by Cecil Beaton. The subject matter that these poems illustrated and underlined was in doubtful taste and the words, used as an obbligato, were wasted. Ashton showed a real understanding of Rimbaud but the work should not have been attempted. The second ballet, *The Witch*, was put on by John Cranko, a young choreographer of great promise. Unfortunately the music selected was Ravel's *Piano Concerto* and in spite of much ingenuity it was impossible to bring music and subject matter together.

The American National Ballet Theatre excelled in the production of Americana such as Agnes de Mille's *Fall River Legend*, superbly interpreted by Nora Kaye, *Rodeo* with an impressive score by Aaron Copland, Eugene Loring's *Billy the Kid*, father of the Americana series, also with a score by Copland, and such popular works as Jerome Robbin's *Fancy Free* and Anthony Tudor's *Pillar of Fire*. The classics were only given in excerpts and suffered in consequence. In *Facsimile*, *The Guests* and *The Age of Anxiety*, these last two for the New York City ballet, Robbins attempted psychological and philosophical studies not altogether suited to the medium of ballet in spite of their evident sincerity and the skill with which they were staged.



Students of the London College of Educational Dance practising at The Lodge, Holyport, Berkshire, in 1950.

In Paris the season's most impressive work was *Phèdre* at the Opéra, with libretto, costumes and decors by Jean Cocteau, music by Georges Auric and choreography by Serge Lifar. The leading role was created by Tamara Toumanova with great dramatic intensity. Another Lifar creation, *Septuor*, to a score by Jolivet, showed to great advantage the strength of the male dancing available at the Opéra. During the summer the company made an extended tour of South America. Roland Petit's *Ballet de Paris* presented one creation, *La Croqueuse de Diamants*, in which Renée Jeanmaire made a return to the stage as singer and dancer after a long illness. In the autumn this company also left for America.

The Marquis de Cuevas' Grand ballet, after seasons in Monte Carlo, Deauville and Venice, left for America in the autumn; this was to be the American debut of what was largely an American company in spite of its three years' residence in Europe. The bulk of the repertoire of the Festival ballet consisted of popular revivals, with the classics *Swan Lake*, *Casse-Noisette* and *Giselle*, the Diaghilev ballets *Petrouchka* and *Les Sylphides* and Massine's *Le Beau Danube*. It was too early to consider the company as a whole apart from the distinguished dancing of its guests and principals. Two guest artists gave memorable performances: Massine in *Petrouchka* and *Le Beau Danube* gave an object lesson in style, stagecraft and attention to subtle detail; and Yvette Chauviré in *Giselle* gave an interpretation that set a standard both for its dancing, its emotional quality and its period romanticism. In presenting both Markova's and Chauviré's Giselles, the two outstanding performances of our day, the Festival ballet started at a high level as far as individual dancing was concerned.

Television in England, France and the U.S. continued to make more and more use of ballet. This was expected in time to have a great effect on the future of the art, both economically and artistically. There was still very little advance from the photographed ballet, and producers had yet to devise true television ballet that would allow the exciting use of camera angles without losing the design or the relationship between music and movement.

On April 8, 1950, Vaslav Nijinsky died in his 61st year (*see* OBITUARIES). Though his active life lasted only from 1909 to 1917 his legend lived on and his legend was creative. It was largely instrumental in restoring the male dancer to ballet, making possible the fruitful careers of Dolin, Serge Lifar, Jean Babilée, André Eglevsky and Yusskevitch. Nijinsky emerged from a great tradition and he enriched that tradition. Both his name and his influence would live long after the death of the last person to see him dance. He belongs to the glorious company of Vestris, Marie Taglioni, Zucchi and Anna Pavlova.

Ballet also mourned the deaths of the composers Lord Berners (*The Triumph of Neptune*, *Wedding Bouquet*, *Les Sirènes*), died April 19 (*see* OBITUARIES), and Kurt Weill (*Anna-Anna*), died April 3; also of two pioneers of dance education, Emile Jacques-Dalcroze, died July 2 (*see* OBITUARIES), and Irene Popard, died April 19. (A. L. HL.)

United States. The New York City ballet presented three new works choreographed by George Balanchine: *Pas de deux romantique*, with music by Carl Maria von Weber; *Pas de deux* from *Sylvia*, music by Léo Delibes; and the *Mazurka* from *A Life for the Tsar*, by Michael Glinka. *The Prodigal Son* and *Baiser de la fée* were revived, and William Dollar's *The Duel* produced in a new version. Frederick Ashton staged *Illuminations*, with a new score by Benjamin Britten and costumes by Cecil Beaton. Jerome Robbins choreographed *The Age of Anxiety*, with music by Leonard Bernstein, and collaborated with Balanchine on *Jones Beach*. In October Balanchine made his American debut as a performer, miming the father in *The Prodigal Son* and dancing in the *Mazurka*.

The Ballet theatre, renamed the American National Ballet Theatre, celebrated its tenth anniversary. It was selected to form a new ballet for the Metropolitan Opera, and appointed Tudor as director, with Nana Gollner as prima ballerina. The Opera Ballet school was reorganized under Tudor and Margaret Craske. Ballet Theatre's production of *Giselle* was televised.

The Marquis de Cuevas' Grand ballet, headed by Rosella Hightower, André Eglevsky, Marjorie Tallchief, George Skibine, Ethery Pagava and Ana Ricarda, made its American debut, presenting several works new to America. Sadler's Wells ballet danced for three weeks at the Metropolitan Opera house and made its first trans-continental tour, breaking all box-office records for ballet. New to America were its productions of *Giselle*, *Dante Sonata* and *Don Quixote*. Margot Fonteyn was prima ballerina, with Moira Shearer, Beryl Grey, Violetta Elvin, Pamela May, Michael Somes and Alexis Rassine in prominent roles. Roland Petit's Ballets de Paris appeared in New York and California. Renée Jeanmaire, Colette Marchand and Gordon Hamilton headed the company.

The San Francisco ballet, directed by William Christensen, gave *Nothing Doing Bar*, music by Darius Milhaud; and *Prelude*, music by George Frederick Handel. San Francisco Ballet guild, Pacific Dance theatre and the Lester Horton Dance theatre were active in California. *Ballet Ballads* was revived in Hollywood. There was increasing dance activity in other centres. The National ballet was founded by Marion Venable in Washington, D.C. Thelma Biracree produced the ballets for the annual Festival of American Music in Rochester, New York. Marion Miller founded the Housten ballet. André van Damme choreographed Maurice Ravel's *Beauty and the Beast* in Charleston, West Virginia. (LN. M.)

Ballroom Dancing. The year 1950 brought a widespread return of the Charleston, a dance first seen in 1925. Swift impetus was added to the revival through contests held in Hollywood, California. The mambo, an advanced and syncopated form of rumba, increased in popularity, with all new rumba tunes of 1950 written in mambo tempo. Samba, the easiest of the Latin-type dances, continued in popularity. Toward the end of 1950, interest was shown in the tango. Jitterbug or "swing" dancing continued to quieten down, adopting less frenzied patterns, and there were few new popular swing tempo tunes. Square dancing found many new enthusiasts. In the early autumn the world's largest square dance jamboree took place in Santa Monica, California, where 8,000 dancers were guided by 36 "callers." (A. MU.)

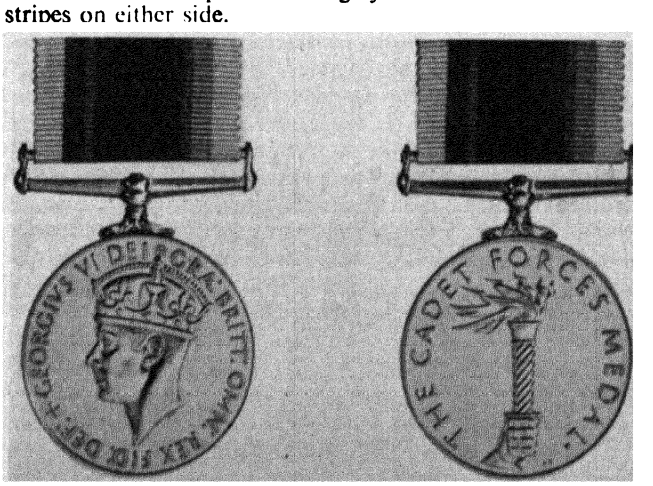
DEATH STATISTICS: *see* VITAL STATISTICS.

DECORATIONS AND MEDALS.

In 1950 in Great Britain the King approved the award of four new decorations—one for service in Malaya and three for long service, in the Royal Observer Corps, in the cadet forces and in the special constabulary.

The *Naval General Service Medal* and the *General Service Medal* (*Army and Royal Air Force*), each with an appropriate clasp, would be issued to members of the British forces, Malayan forces recruited locally, the civil police forces and certain civilian categories. The qualifying period started from June 16, 1948, and would continue as long as the then existing conditions remained.

Members of the Royal Observer Corps with a total of 12 years' satisfactory service would receive the *Royal Observer Corps Medal*. This was a circular cupro-nickel medal with an effigy of the King on the obverse and a representation on the reverse of an Elizabethan coast-watcher holding a torch and standing by a signal fire. The ribbon was light blue, with a central stripe of silver-grey and narrow dark blue stripes on either side.



The Cadet Forces Medal which was instituted in 1950 for long service in the cadet forces.

Officers, chief petty officer instructors and adult warrant officer instructors, and adult warrant officers who had completed 12 years' service after Sept. 3, 1926 (service during World War II counting double) would be eligible for the *Cadet Forces Medal*. The medal would be circular with an effigy of the King on the obverse, and on the reverse the inscription "The Cadet Forces Medal" and a representation of a torch. The ribbon was green with yellow edges, narrow

stripes of dark blue, red and light blue being superimposed. A clasp would be awarded for an additional 12 years' service.

In July the King approved regulations for a bronze medal, the *Special Constabulary Long Service Medal.* Special constables who had served for nine years would be eligible. The centre part of the ribbon was red, and the remainder consisted of three longitudinal stripes of equal width, the central stripe being black and the other two white. A clasp or bar for service in World War I and an additional clasp or bar for further service of ten years after 1919 would be awarded.

Australia. A new medal, the *Australian Service Medal, 1939-45,* was announced. It would be awarded to all Australian ex-servicemen with 18 months' full-time service or three years' part-time service during World War II.

Canada. A new distinctly Canadian decoration, the *Canadian Forces Decoration,* was approved. It would be awarded for 12 years' service in either the permanent or reserve forces and would consist of a 10-sided silver-gilt medal. On the obverse would be an effigy of the King and on the reverse a naval crown, maple leaves and an eagle. The ribbon was red, equally divided by three narrow vertical white stripes.

Burma. Details were published of the honours and awards of the Union of Burma. Two orders were instituted, the *Order of Thu Dhamma* and the *Order of the Burma Union.* Both were divided into military and civil divisions, the former into three classes and the latter into five classes. Three decorations were established for acts of gallantry and devotion to duty in the face of the enemy, *Aung San Thuriya* (equivalent of the *Victoria Cross*), *Thiha Thura Tazeit* and *Thura Tazeit.* For acts of heroism there were *Aung San Tazeit* and *Thiha Bala Tazeit.* Distinguished service during a period of war but not in the face of the enemy would be recognized by the award of *Sit Hmu Htan Gaung Hmat Tan Win.* Long, faithful and honourable service awards were instituted as were campaign and liberation stars.

Greece. The King founded a new order, the *Order of Social Service,* to be awarded in recognition of services to public welfare and for distinction in letters and the arts. The order was divided into four classes, grand cross, dame, commander and officer.

India. A new campaign medal, *General Service Medal, 1947,* was instituted for award to members of the forces for active service. Clasps would be awarded for each operation. The first clasp was entitled "Jammu and Kashmir."

Korea. Among the decorations awarded by the North Koreans during the Korean war were *Hero of the Republic,* the *National Flag Medal* and the *Golden Star Medal.*

U.S.S.R. A medal was instituted for "distinguished service of border guards safeguarding the inviolability of the frontiers of the Soviet Union."

DE GASPERI, ALCIDE, Italian statesman (b. Pieve Tesino, Trentino, April 3, 1881), after studying at the University of Vienna, became editor of *Il Nuovo Trentino* and later was elected to the Austrian parliament as an Italian minority representative. After the union of his native province with Italy, he was elected deputy to the Italian parliament in 1921. Already a prominent member of the Christian Democratic party (then called Partito Popolare Italiano), he opposed Mussolini's dictatorship and in 1926 was sentenced to four years' imprisonment for anti-fascist activities. When freed, he became an official of the Vatican library. During World War II De Gasperi took part in the resistance movement in Rome and on June 9, 1944, joined the first Bonomi cabinet as minister without portfolio. Minister of foreign affairs of the second Bonomi (Dec. 10, 1944) and Parri (June 19, 1945) cabinets, he was elected leader of the reconstructed Christian Democratic party (Democrazia Cristiana) and on Dec. 9, 1945, became prime minister. His first, second (July 12, 1946) and third (Feb. 1, 1947) cabinets were coalition governments with Socialist and Communist participation. On June 1, 1947, he formed a cabinet without Communists. This government was reconstructed on Dec. 14, 1947, by including the representatives of moderate Socialist and Republican parties. After the election of April 18-19, 1948, in which he led his own party to victory, De Gasperi formed his sixth cabinet (May 23), again a coalition. On Feb. 11, 1949, the 20th anniversary of the signing of the Lateran treaty between Italy and the Papacy, he made his first official call on Pope Pius XII. He visited Trieste on June 10, and pledged the Italian government to continue to work for the return of the territory to Italy. Following the withdrawal, on Oct. 31, of the Democratic Socialist ministers, De Gasperi resigned on Jan. 12, 1950, but on Jan. 27 succeeded in forming his seventh cabinet —this time without Liberals but with Democratic Socialists. On Feb. 1, he received Ernest Bevin, returning to London from Colombo. In an Easter broadcast on April 8, he defended the Italian participation in the North Atlantic treaty; on May 3, in the Senate, he demanded an "Italian solution" to the problem of Trieste.

DEMOCRATIC PARTY, U.S.: *see* POLITICAL PARTIES, U.S.

DENMARK. Constitutional monarchy of north central Europe composed of the peninsula of Jutland and 100 inhabited islands, the largest being Zealand (Själland) and Fyn (Fünen). Denmark controls the three straits between Kattegat and the Baltic sea: the Oresund (between Sweden and Zealand), the Great Belt (between Zealand and Fyn) and the Small Belt (between Fyn and the Jutland peninsula). Area, excluding Faeroe Islands (*q.v.*): 16,573 sq.mi. (peninsula of Jutland, 11,411 sq.mi.). Pop.: (1945 census) 4,045,232, (1949 est.) 4,200,000. Language: Danish. Religion: Lutheran, with small Roman Catholic and Jewish minorities. Chief towns (pop., 1945 census): Copenhagen, including Frederiksberg and Gentofte (cap., 927,404); Århus (107,393); Odense (92,436); Ålborg (60,880); Esbjerg (43,241). Ruler, King Frederik IX; prime ministers in 1950, Hans Hedtoft and (from Oct. 30) Erik Eriksen (*q.v.*).

History. The main purpose of Denmark's foreign policy in 1950 was to participate in building the defence system of the North Atlantic treaty. On Jan. 27 a Danish-American mutual-defence assistance agreement was signed in Washington, giving priority to economic recovery as being essential to international peace and security and promising deliveries of U.S. military equipment to Denmark. Later some 20 U.S. military experts were sent to Denmark to help to get the military aid programme under way. After the outbreak of war in Korea and the recommendations of the North Atlantic council of deputies at its meeting in London on Aug. 1, the Danish Rigsdag on Aug. 9 passed two bills to provide, separately, Kr 300 million in additional appropriations for the armed forces and Kr. 50 million for civil defence; both bills covered a period of two years. The Danish government on Sept. 25 agreed upon the establishment of an integrated North Atlantic force under centralized command but at the same time expressed doubts concerning the proposed rearmament of Western Germany. A complete reorganization of Danish defence and the establishment of a unified command for all three services came into effect on Oct. 1. The army and naval ministries were merged into a single Ministry of Defence, and a supreme commander in chief with a defence staff and a defence board under him replaced the three former commanders.

The Communist aggression in Korea was condemned by the Danish government and people, and offers by the government



Mrs. Ingeborg Hansen, who in March 1950 was elected speaker of the Landsting (upper house) of the Danish parliament. She was the first women speaker of a European parliament.

to supply medicines and sugar to South Korea and to send the motorship " Jutlandia " as a hospital ship for service in Korean waters were accepted by the U.N. During a critical period for the U.N. forces at the beginning of December the Danish prime minister recalled that Denmark had recognized the government of the people's republic of China on Jan. 9 and stated that Denmark was in favour of admitting this government to the U.N.

During 1950, as in previous years, Danish fishing vessels were captured and detained, sometimes for weeks, in the international waters of the Baltic by the Russians who claimed that Soviet territorial waters extended to a distance of 12 sea mi. from the coast, except in cases covered by international agreement. On July 25 the Danish government protested at the Soviet claim in a note emphasizing that Denmark did not recognize the right of any state in the Baltic to establish a territorial offshore limit of 12 mi. and recalling that the limits of territorial waters of the European states had been fixed at 3 or occasionally 4 mi. The Soviet Union rejected the Danish protest.

The breakdown of the discussions in 1949 on a Scandinavian defence treaty had hindered the development of Scandinavian co-operation; a further set-back occurred in 1950 when, on Jan. 18, a report issued by the Joint Committee for Scandinavian Economic Co-operation set up in 1948 stated that there was no basis yet for a Danish-Norwegian-Swedish customs union, to which Denmark had been looking forward with great expectations. However, a strong wish for increased co-operation with Norway and Sweden still existed in Denmark, and progress was made during 1950 with a project to supply Norwegian electricity to Denmark *via* Sweden. Under the scheme, from June 1953 the current would be supplied by a new hydro-electric power station at Aura, near Trondheim (Norway) and would add 600 million kwh. annually to Denmark's electricity consumption. The total cost of the project was estimated at Kr. 161 million, of which Norway would provide Kr. 100 million, Sweden Kr. 49 million and Denmark Kr. 12 million; this however was based on the assumption that Kr. 67 million required for machinery and raw materials would be covered by E.R.P. funds.

An agreement for closer economic co-operation between Denmark, Great Britain, Norway and Sweden was signed on Jan. 30. Limitations on tourist expenditure were removed, and current payments were allowed to be made without restrictions between the four countries except for the importing of goods subject to licence. Furthermore the agreement considered how far the use of sterling by the Scandinavian countries in third countries could be extended. As in fact the use of sterling in third countries was enlarged to some extent Denmark gained relief in its payment difficulties; nevertheless income from exports fell short of expenditure on imports and the difference continued to increase. There were signs of an economic crisis. Import prices were rising, whereas export prices were mostly fixed by trade agreements for long terms. This discrepancy between import and export prices together with the liberalization of foreign trade led to a deterioration in Denmark's balance of payments: for 1950 the deficit was estimated at about Kr. 350 million and it was foreseen that it would be greater still in 1951. In order to reduce this deficit the Danish National bank on July 4 raised the bank rate for commercial bills from 3½ to 4½%, the re-discount rate for Treasury bills from 3 to 4% and the bank's lending rates for loans from 4-4½ to 5-5½%; in order to increase receipts from exports the government asked for a 7½% price increase on butter supplies to the United Kingdom, but the Anglo-Danish negotiations broke down.

In August the Social Democratic minority government of Hans Hedtoft found it necessary to introduce substantial import restrictions and submitted proposals to this effect to the Rigsdag. The proposals had an unfavourable reception, and the prime minister decided on Aug. 9 to ask the king to dissolve the Folketing and call a general election for Sept. 5. The election proved indecisive, since the Social Democrats, although remaining the largest party, failed to secure an overall majority. (*See* ELECTIONS.)

In the ensuing negotiations for the formation of a new government all attempts to bring about a coalition failed, and on Sept. 14 the king invited Hedtoft to remain in office with the Social Democratic minority government. On Oct. 4 the government reintroduced, with few amendments, the bill for the reduction of imports together with new taxation measures, Hedtoft again stressing the urgent need to reduce the large deficit in the balance of payments and to counter the danger of inflation with new taxes, duties and compulsory savings—new taxes also being necessary to pay for rearmament. In a debate, the government won the support of the Conservatives and Agrarians, whose demand for a modification of the proposed financial and taxation measures it agreed to accept. On Oct. 25, however, the government was defeated in the Folketing on the question of butter and margarine rationing; the Conservatives, Agrarians and the Retforbundet (right-wing Liberals) demanded that the rationing should be abolished at once, whereas the government insisted that the abolition of butter rationing would lead to a serious fall in butter exports and so increase the balance of payments deficit. After this defeat Hedtoft handed the government's resignation to the king on Oct. 26 and advised him to call on the opposition parties to form a new cabinet. On Oct. 30 a Agrarian-Conservative coalition was formed, consisting of 7 Agrarian and 6 Conservative ministers, Erik Eriksen (Agrarian) becoming prime minister and Ole Bjørn Kraft (Conservative) minister of foreign affairs. The new government abolished butter and margarine rationing, began

restricting investments (the National bank again raised its bank rate on Nov. 2 from 4½ to 5%), increased taxes and duties and introduced compulsory savings. (H. LN.)

Education. Schools (1948-49): elementary, middle and secondary 4,143, pupils 486,863; technical 340, pupils 53,000; commercial 198, pupils 34,000; agricultural 25, pupils 2,400; adult 55, pupils 7,300; teachers' training colleges 18, students 2,500; universities 2, professors and lecturers 230, students 7,300; institutions of higher education 7, professors and lecturers 152, students 5,193. No illiteracy.

Agriculture. Main crops ('000 metric tons, 1949; 1950 est. in brackets): wheat 299 (290); barley 1,571; oats 982; rye 469 (345); potatoes 1,794; sugar, raw value 246 (290). Livestock ('000 head): cattle (July 1950) 3,044, of which cows in milk 1,572; sheep (July 1949) 67; horses (March 1950) 482; pigs (Jan. 1950) 3,208; chickens (March 1950) 18,532. Dairy production ('000 metric tons, 1949; 1950, six months, in brackets): milk 4,884 (2,700); butter 156 (89); cheese 63·6 (28·4); eggs 118 (60). Meat production ('000 metric tons, 1948; 1949 in brackets): total 298 (400), of which beef and veal 116 (131), pork 179 (266). Fisheries (1949): total catch 227,289 metric tons valued at Kr.177·5 million.

Industry. Industrial establishments (June 1948): 109,288; persons employed 641,379. Fuel and power (1949; 1950, six months, in brackets): coal distributed ('000 metric tons) 7,368 (4,013); manufactured gas (million cu. metres) 369·6 (186·4); electricity (million kwh.) 1,636 (850). Manufactures (1949; 1950, six months, in brackets): cement ('000 metric tons) 834 (417); new dwelling units ('000s) 244·8 (124·8).

Foreign Trade. (Million kroner, 1949; 1950, six months, in brackets) import 4,205 (2,698); export 3,564 (2,040). Main sources of imports (1949): U.K. 32%; U.S. 16%; Sweden 7% (7%). Main destinations of exports: U.K. 44%; Germany 7%; Norway 5%.

Transport and Communications. Roads (1949): 34,564 mi. Licensed motor vehicles (Dec. 1949): cars 111,417; commercial 57,777. Railways (1949): 2,110 mi.; freight net ton mi. 693 million. Shipping (July 1949): number of merchant vessels over 100 gross tons 698; total tonnage 1,170,373. Air transport: passenger-mi. (1949) 36,031,000. Telephone subscribers (1948): 470,292. Radio receiving sets (1949): 1,201,600.

Finance and Banking. (Million kroner) budget: (1950-51 actual) revenue 2,040, expenditure 2,033; (1951-52 est.) revenue 2,163, expenditure 2,151. Net foreign debt (Dec. 31, 1948; Dec. 31, 1949, in brackets) 2,245 (2,378). Currency circulation (Aug. 1949; Aug. 1950 in brackets): 1,365 (1,439). Bank deposits (Aug. 1949; Aug. 1950 in brackets): 4,947 (4,914). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 84·5 (79·0). Monetary unit: *krone* (pl. *kroner*) with an exchange rate of Kr. 19·34 to the pound and Kr. 6·92 to the U.S. dollar.

DENTISTRY. The majority of dentists taking part in the British national health service continued to be seriously overworked in 1950, and fears were expressed that the strain to which the profession was subjected would lead to some lowering of standards. The high cost of the dental service, relative to that of the general medical service and the original estimates, caused the minister of health to set on foot an examination of the basis on which the remuneration of dentists was founded. Without, however, delaying for the findings of this investigation to be made known, the minister reduced the scale of fees on which dentists were paid. This action led to widespread dissatisfaction in the profession and caused the British Dental association to break off negotiations with the ministry. The position of the school dental service and that for mothers and young children became steadily worse during the year because local authorities did not raise the salaries of their dental officers in order to bring them nearer to the remuneration they could command in private practice.

A Whitley council was set up to deal with this problem but some dental officers left the service and authorities were for the most part unable to replace them. Thus, these important services, on which the ultimate success of the dental part of the health service depended, were starved of personnel. The seriousness of this position led to the appointment of a mission to investigate the working of the New Zealand scheme of employing specially trained "dental nurses" to treat school children (*New Zealand School Dental Nurses: Report of United Kingdom Dental Mission*, H.M.S.O., London, 1950). Tentative proposals were also put forward in unofficial quarters that the course of study for the minimum qualification should be shortened because, the dental schools being already full and their total output only just sufficient to make good the losses from the register due to death and retirement, it was imperative to reduce the time in which each student could complete his training. This view did not gain general acceptance, and an editorial in the *British Dental Journal* (vol. 89, no. 5, 1950) dealing with the suggestion said, "If we want to produce a dental technician to deal with one or other or even all those aspects of dentistry which, at present, form general dental practice, it can be done in a much shorter time than it takes to produce a dental surgeon now; but let us not then pretend that we are still producing the same article, or call this product by the same name." It is worthy of note in this connection that, during the year, the University of Birmingham abolished its licence in dental surgery and experienced no difficulty in obtaining candidates for the longer course for the degree in the subject.

An important development in dental health education was the adoption by the World Health assembly of a resolution requesting the executive board and the director general of the World Health organization "to study the problem of dental health with a view to presenting a programme in this field for consideration by the fourth World Health assembly." This resolution was supported at Geneva by delegates from the International Dental federation (F.D.I.), which celebrated its jubilee in Paris during the year. In Britain, an outstanding event of the year was the amalgamation of the three principal dental organizations in the reconstituted British Dental association, whose membership now included the great majority of practising dentists in the country. (B. J. W.)

DERMATOLOGY. Cortisone and ACTH (adrenocorticotropic hormone) were used in the treatment of a large number of cutaneous diseases during 1950, including acute lupus erythematosus, dermatomyositis, scleroderma, panarteritis nodosa, psoriasis, pemphigus, hypersensitivity states such as drug eruption, exfoliative dermatitis, severe urticaria, eczema-dermatitis and the group of lymphoblastic diseases—leukaemia, Hodgkin's disease and mycosis fungoides. The most impressive results were obtained in the treatment of acute systemic lupus erythematosus, a disease that in many instances is fatal. In a number of cases, even when patients were moribund, the clinical symptoms were suppressed quickly and dramatically and remissions resulted, whereas previously remissions had occurred only rarely in acute lupus erythematosus. In some cases of severe penicillin reactions ACTH and Cortisone produced striking results when all of the usual treatments failed.

Adverse and, in general, unimportant cutaneous side effects from treatment were noted not infrequently. Oedema, mild cutaneous haemorrhages, delayed wound healing, acne, hirsutism of the face, linear scars on the abdomen and breasts, hyperpigmentation, thinning of the scalp hair, a rounding of the face and abnormal deposit of fat on the neck and buttocks were observed. Fortunately, except for the linear scars, the changes were reversible and it was later determined that they could be prevented by proper dosage. Studies were being conducted to determine an optimum dosage technique, the effect of small maintenance doses by prolonged administration, the use of slowly absorbed vehicles, methods of administration other than by injection and the mode of action of the drugs.

One of the drawbacks to penicillin G, the form of penicillin that usually was employed in treatment, was that it stimulated the development of allergic reactions in a rather high percentage of cases. These disturbing reactions were prevented successfully by a new synthetic crystalline preparation

designated penicillin O, allylmercotomethyl penicillin. Its use by inhalation, oral troches and parenterally in 57 patients sensitive to penicillin G produced no untoward reactions, and it proved as effective therapeutically as penicillin G. Fourteen of the patients were deliberately treated with penicillin G again later without the recurrence of the untoward reactions they had experienced before they had received penicillin O—which indicated that penicillin O may not only prevent reactions but may act also as a desensitizing agent.

Banthine, a synthetic drug which acts on the parasympathetic nerve endings, was found to be effective for reducing excessive perspiration. It is an anticholinergic drug originally introduced for the treatment of peptic ulcer. It was noted that within 45 min. after 100 mg. of the drug were swallowed cold moist palms became warm and dry. After its effect upon several patients was studied, the optimum dosage was found to be 50 to 70 mg. every four hours and 100 mg. before activities associated with stress. The drug caused dilation of the pupils of the eyes, dry mouth, a tendency to constipation and some blurring of vision. It should not be used by anyone suffering from glaucoma.

Eurax, N-ethyl-o-Crotono-tobide, was originally introduced as a parasiticide for the treatment of scabies. Not only was it an effective miticide, but it was subsequently found to be fairly effective as an antipruritic agent to relieve the itching of a number of other diseases besides scabies—diseases such as varicose eczema, senile pruritis and neurodermatitis. After it was applied there was at first a sensation of warmth, then relief from the itching which was effective for from 4 to 18 hr. The ointment was aesthetically and cosmetically acceptable, easy to apply and to remove, and it did not stain. Approximately one person in 400 was irritated by it. The drug had no curative effect upon the lesions of the diseases but it did afford relief from itching except when the eruptions were acutely inflamed.

It seemed possible that a new usefulness other than as an antiurticarial agent might be found for some of the antihistaminic drugs. Prompted by the observation that ringworm infection of the feet responded dramatically to applications of a cream containing 2% pyribenzamine, studies were undertaken to determine whether the effect noted was solely against the allergic manifestations incited by the infecting organisms or whether the antihistaminic compounds possessed fungistatic or fungicidal properties as well. Three compounds were studied, antistine, pyribenzamine and diphenylpyraline. The results obtained indicated that the latter two compounds possessed properties that were inhibitory to pathogenic fungi. (H. RA.)

DIABETES. The effort to discover the undiagnosed diabetics in the United States reached greater intensity during 1950 than in the two preceding years. A new feature was a two-day Diabetes fair held in Boston, Massachusetts; the all-day exhibits were crowded; the attendance was estimated at 10,000; 2,000 urine tests and 1,350 blood-sugar determinations were performed. Throughout the country the press, radio, pharmacists and pharmaceutical manufacturers combined with the doctors to make the public conscious of diabetes, its symptoms and the significance of heredity and obesity in its aetiology.

NPH insulin, long used in Denmark, was recognized by the Insulin Committee of Toronto and put on sale on Oct. 16, 1950. It acts more slowly than regular and crystalline insulin, longer than globin but for a shorter period than protamine zinc insulin. One of its advantages is the possibility of its intensification and prompter action by the addition of regular insulin to it in the same syringe without conversion to protamine insulin.

Evidence showed that adrenocortical hormones act on carbohydrate metabolism by decreasing peripheral utilization of glucose and by enhancing gluconeogenesis, thereby increasing glycogen deposition in the liver. This results in a diabetic glucose tolerance curve at first, then in frank hyperglycaemia and glycosuria. Action in this respect can be considered as antagonistic to insulin. Whereas prolonged and intensive administration is necessary to produce an even mildly diabetic symptomatology in normal persons, short courses of relatively small doses result in a profound exacerbation of symptoms in patients with diabetes, even though this is mild. This was interpreted as representing a lack of insulin reserve, and might in time be applied to the detection of as yet asymptomatic, preclinical diabetes. Thus far the diabetic symptoms produced had nearly always proved reversible after the discontinuation of these drugs.

H. Malmros in Sweden reported upon arteriosclerosis and diabetes in wartime. Arteriosclerosis, the major complication in diabetes, arises relatively early in obese individuals, but is remarkably uncommon in the autopsies of those who have had long, wasting illnesses. It was less in those subjected to famine in World Wars I and II and reappeared with the return of more food. Malmros pointed out that the qualitative composition of the diet, its content of cholesterol foods such as eggs, butter, cream, pork and animal fats was important. Thus these foods were less used in China where arteriosclerosis coronary disease and hypertension were less frequent. He contrasted the high (141 per 10,000) and the low (42 per 10,000) incidence of these diseases in Sweden and in Italy with the consumption of butter, which was ten times as high in the former country. So, too, in Stockholm, when in 1942-43 less cholesterol food was available, there was less arteriosclerosis; and myocarditis and diabetes decreased in 22 of the largest clinics during World War II and increased when food became plentiful. The contrast between the frequency of vascular disease and the diets of Finland and the U.S. supported this view. An individual in the U.S. consumed 130gm. cholesterol a year and an individual in Finland 24gm. when the diet was low. Arteriosclerotic conditions in Norway showed a fall in the lean years and in fact the mortality from myocardial disease and arteriosclerosis was 87 per 100,000 compared with 256 in the U.S. Malmros concluded that there was much reason to reject the former belief that arteriosclerosis was caused only by age. The prescription of a low cholesterol diet for diabetics was still debatable, because so much of the cholesterol is formed in the body. (*See* also ENDOCRINOLOGY.) (E. P. J.)

BIBLIOGRAPHY. Ernest Bruch, "Recent Progress in Insulin Physiology," *Arch. Int. Med.*, Sept. 1950; H. Malmros, "The Relation of Nutrition to Health: A Statistical Study of the Effect of the War-time on Arteriosclerosis, Cardiosclerosis, Tuberculosis and Diabetes," *Acta med. Scandinav, supp.*, June, 1950; Howard F. Root, Richard H. Sinden and Ralph Zanca, "Factors in the Rate of Development of Vascular Lesions in the Kidneys, Retinae and Peripheral Vessels of the Youthful Diabetic," *Am. J. Digest Dis.*, June 1950.

DIAMONDS. The year 1950 was again favourable for all branches of the diamond industry. A record volume of sales was effected, and the total for the year amounted to £50,967,041 as against the previous record of £38,100,000 for 1948. The table shows the trend of diamond sales since the beginning of 1946.

DIAMOND SALES, 1946-50

(£ million)

	1947	1947	1948	1949	1950
Gem	26·1	20·1	26·8	19·9	38·3
Industrial	3·5	4·4	11·3	8·5	12·6
Total	29·6	24·5	38·1	28·4	50·9

The principal African diamond-producing countries were the Union of South Africa and South-West Africa, the

Belgian Congo, the French colonies, Portuguese West Africa, Sierra Leone, the Gold Coast and Tanganyika. In South America Brazil and, to a small extent, British Guiana, added to the world's production.

When the Jagersfontein mine in the Orange Free State was re-opened in Dec. 1949, after being closed for 17 years, 800 loads (about 500 tons) a day of blueground were shifted, washed and treated. This figure was later increased to 6,000 loads. Twenty-three tons of blueground on an average produced one carat of cuttable rough stones; 142 carats equal 1 oz. in weight.

Industrial diamonds in 1950 ranked amongst the more important commodities and were regarded as a vital and strategic raw material. Whereas before World War II about 50% of all diamonds, by weight, went to industry, the proportion rose during the war years to approximately 80%. Diamonds were used to grind optical lenses, to make hearing-aids, in drilling and boring tools, in musical instruments, in plastics, in paper-making, to cut and engrave glass, in electrical household goods and in the telephone, etc.

Having no indigenous diamonds, the United States imported about 80% of the world's production, either in the rough state or as polished stones.

U.S. DIAMOND IMPORTS 1949-50

	1949		1950*	
	Carats	Value	Carats	Value
Uncut gems	651,150	$28,300,000	432,241	$21,588,000
Cut gems	335,487	$41,428,000	217,734	$25,021,000
Industrial	6,362,989	$17,590,000	4,349,206	$11,412,000
Total†	7,349,626	$87,318,000	4,999,181	$58,821,000

* Six months only. † Cf. 11,720,134 carats for $132,889,524 in 1948.
SOURCE: Bureau of Census, Department of Commerce trade report.

Diamond-cutting centres were already established in the U.S., Belgium, Canada, France, Israel, the Netherlands, South Africa and the United Kingdom; and the industry was subsequently set up in Australia. (*See* also GEMS.)

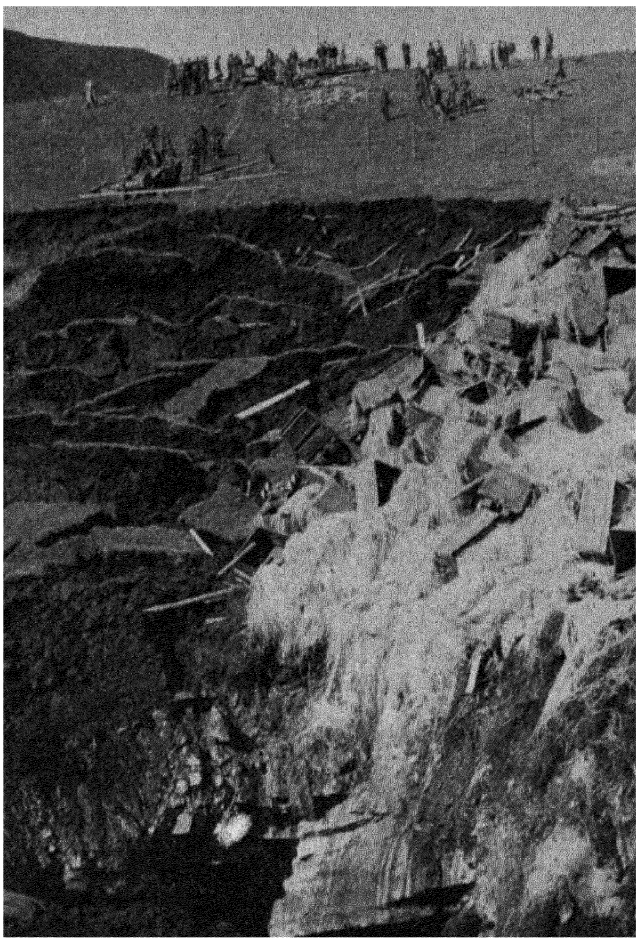
DIELS, OTTO. German chemist (b. Hamburg, Jan. 23, 1876), was the son of Hermann Diels of Berlin, the famous classical scholar. Educated at the Royal Joachimsthal gymnasium and at the University of Berlin, he graduated as a doctor of philosophy in 1899 and became an assistant in the Chemical institute in the same year. He was appointed a recognized teacher of chemistry in 1904, titular professor in 1906 and extraordinary professor in 1914. From 1916 he was professor of chemistry and chemical technology and director of the Chemical institute at the University of Kiel. In 1950 the Nobel prize for chemistry was awarded jointly to Diels and his former pupil Kurt Alder (*q.v.*) for their work on diene synthesis. The formation of organic chemical compounds by diene synthesis (the Diels-Alder reaction) had been recorded by earlier workers, but Diels and Alder provided the first experimental proof of the nature of the reaction and demonstrated its wide application to the synthesis of ring compounds of many types. Study of the reaction contributed greatly to knowledge of the processes by which plastic materials of great practical value were obtained. Diels was also noted for his work on other aspects of organic chemistry and in particular for his studies on cholesterol. He was the author of textbooks on both organic and inorganic chemistry and of numerous papers. (W. J. BP.)

DIETETICS: *see* FOOD RESEARCH.

DISASTERS. During 1950 loss of life and property occurred in the following disasters:

Air

Jan. 20 Near Cochabamba, Bolivia. All the 32 occupants were killed when a military transport aircraft crashed in a thunderstorm.



The 300-ft.-wide crater which caused 129 men to be trapped underground in the Knockshinnoch Castle pit, New Cumnock, Ayrshire, Sept. 1950; 116 of the trapped miners escaped.

Jan. 28 Yukon territory, Canada. Forty-four persons aboard a U.S. Air Force C-54 transport plane were lost when the aircraft disappeared on a flight to the U.S.

Mar. 7 Minneapolis, Minnesota, U.S. Fifteen persons died when a civilian transport plane struck a flagpole while attempting a landing, plunged into a residence and exploded.

Mar. 12 Sigingstone, Glamorgan. Eighty persons aboard a chartered Avro Tudor V air liner, returning to Wales after attending an international Rugby match at Belfast, died when the plane crashed near its destination. Three passengers survived.

April 21 Southwest of Tokyo. Thirty-five U.S. occupation personnel, including five high officials of General Douglas MacArthur's headquarters, were killed when a U.S. Air Force transport crashed in the Tanzawa mountains.

May 24 Near Pasto, southern Colombia. Twenty-five persons aboard a transport plane died when the aircraft struck the Galeras volcano. A ten-year-old girl was the only survivor.

June 5 Atlantic ocean, 330 mi. northeast of Miami, Florida. A chartered passenger aircraft, carrying migratory farm-workers from Puerto Rico to New Jersey, crash-landed in the water. Of the 65 persons aboard, 45 were later saved by surface craft.

June 9 Near Maracaibo, Venezuela. Fifteen persons, including 12 members of a U.S. missionary party and 3 of the crew, died when their plane crashed.

June 12 Near Bahrein, Persian gulf. Forty-one persons were known to have died and 6 of the 52 aboard were missing and presumed dead when an Air France Skymaster passenger plane crashed on coming in to land at Bahrein.

June 14 Near Bahrein, Persian gulf. Thirty-eight persons aboard a second Air France Skymaster were killed and 13 were saved when the aircraft crashed in circumstances identical with the one above.

June 24 Lake Michigan, off South Haven, Michigan, U.S. Fifty-eight persons were killed when a commercial air liner crashed into the lake.

June 26 Near York, Western Australia. Twenty-eight persons died when a Skymaster air liner crashed near this small town 50 mi. east of Perth.

July 9 Casablanca, French Morocco. Twenty-one of 30 persons aboard were killed when a French passenger plane crashed shortly after taking off. Witnesses said an engine caught fire during the take-off.

July 17 Punjab, India. All 22 persons aboard an Indian transport aeroplane died when the craft crashed in the Himalayan foothills. Among the victims were three U.N. Kashmir observers.

July 23 Near Myrtle Beach, South Carolina. Thirty-nine members of the Air National guard were killed when their plane developed engine trouble, crashed and exploded. There were no survivors.

July 27 Near Oshima Island, Japan. Twenty-five persons, including four war correspondents, were given up for lost after a U.S. transport plane had plunged into the sea en route from Tokyo to Kyushu. There was one survivor.

July 28 Near Pôrto Alegre, Brazil. Forty-three passengers and six members of the crew of a Brazilian Constellation plane were killed when the aircraft crashed and caught fire.

July 29 Near map-point "Bidon 5," Sahara desert. A French air liner crashed with 28 persons aboard, and all were presumed dead.

Aug. 31 Near Wadi Natrun, Egypt. A U.S. air liner crashed and caught fire, killing 55 persons.

Oct. 17 Mill Hill, London. A British Dakota air liner, after the failure of one engine, plunged into a garden, killing 28 of the 29 persons aboard.

Oct. 31 London Airport, Heathrow, Middlesex. A British Viking air liner, attempting to land in fog by the ground control approach system, overshot the runway and crashed into a stack of iron pipes; 28 of the 30 persons aboard died in the ensuing fire.

Nov. 3 Mont Blanc, French Alps. Forty-eight persons aboard an Air India Constellation plane died when the craft crashed on the mountain.

Nov. 7 Near Butte, Montana, U.S. Twenty-two persons were killed when a Northwest Airlines plane crashed at Homestake pass.

Nov. 14 Near Grenoble, France. A Canadian plane, carrying 51 passengers (most of them Canadian pilgrims returning from a Holy Year visit to Rome) and a crew of 7, crashed, killing all on board, after hitting the Obiou mountain, French Alps.

Nov. 21 Mount Moran, northwest Wyoming, U.S. A twin-engined transport plane carrying members of the New Tribes mission, a religious sect, crashed, killing 21 aboard.

Dec. 9 Near Bangui, French Equatorial Africa. A French transport plane carrying Senegalese soldiers crashed. Of 58 persons aboard, 38 were killed, 7 missing and 3 injured.

Dec. 13 Denad reserve forest, 40 mi. north of Coimbatore, Madras, India. All 20 occupants of an Air India Dakota aircraft were killed when the plane crashed and exploded.

Dec. 15 Southwestern Venezuela. A chartered air liner carrying 31 persons, including 28 students flying home for the Christmas holidays, crashed with the loss of all aboard.

Dec. 18 Near Tourane, Vietnam. Two French transport planes collided in mid-air, killing 30 persons, mostly French army officers.

Dec. 19 Near Baguio, Philippines. Thirty-seven persons aboard a U.S. Air Force transport plane were presumed lost when the plane crashed into Mount Pulog.

Fires and Explosions

Jan. 7 Davenport, Iowa, U.S. Forty-one women, mostly mental patients, were burned to death when fire destroyed a unit of Mercy hospital; a woman mental patient admitted starting the blaze.

Jan. 11 Kowloon, Hong Kong. Fire that destroyed thousands of shack dwellings left 20,000 homeless and an uncounted number dead.

May 1 Patiala, India. Explosion of an ammunition dump in a fort killed 32 persons and injured 40.

May 6-8 Rimouski, Quebec, Canada. More than 2,500 persons in a population of 15,000 were left homeless when fire destroyed a large portion of the town.

May 11 Near Charleroi, Belgium. Thirty-eight miners were killed in the explosion of gas in Mariemong-Bacoup coal mine.

May 19 South Amboy, New Jersey. At least 29 persons were killed and about 400 injured when munitions on four barges exploded.

May 20 Gelsenkirchen-Rotthausen, Germany. Explosion and fire in the Dahlbusch coal mine fatally injured at least 75 miners out of 96 who were in the mine.

May 21 Gwalior, Central India. An explosion at an ammunition factory killed 25 people and wrecked the building.

May 25 Chicago. Thirty-four people were killed in a fire following a crash between a petrol lorry and a tramcar.

June 27 Near Homs, Syria. Sixty persons were killed and 93 injured in an explosion at a fuel depot.

Sept. 26 Creswell, Derbyshire. A flash fire 1,000 ft. down in the Creswell coal shaft killed 80 coal miners; 120 others were rescued.

Oct. 4 Michalka, northeastern Moravia, Czechoslovakia. An explosion in a coal mine killed 36 miners.

Oct. 5 Lota, Concepción province, Chile. Thirty-two coal miners were killed in a gas explosion in an under-sea coal mine.

Natural

Jan. 15 Northwest Pacific area, Canada and U.S. At least 30 persons died in the U.S. and 4 in Canada as a result of violent storms.

April 2-7 Southern Ecuador. Floods of the Tomebamba river left at least 50 persons dead or missing and caused extensive damage to property.

May 9-20 Winnipeg. About 110,000 persons left Winnipeg as the flooding Red river threatened the city; the refugees were given temporary housing in the provinces to the east in the greatest flood evacuation in Canadian history. Property damage ran into many millions of dollars.

May 21 Cuzco, Peru. At least 83 persons died, more than 200 were injured and about 30,000 were made homeless, when this city was rocked by earthquakes.

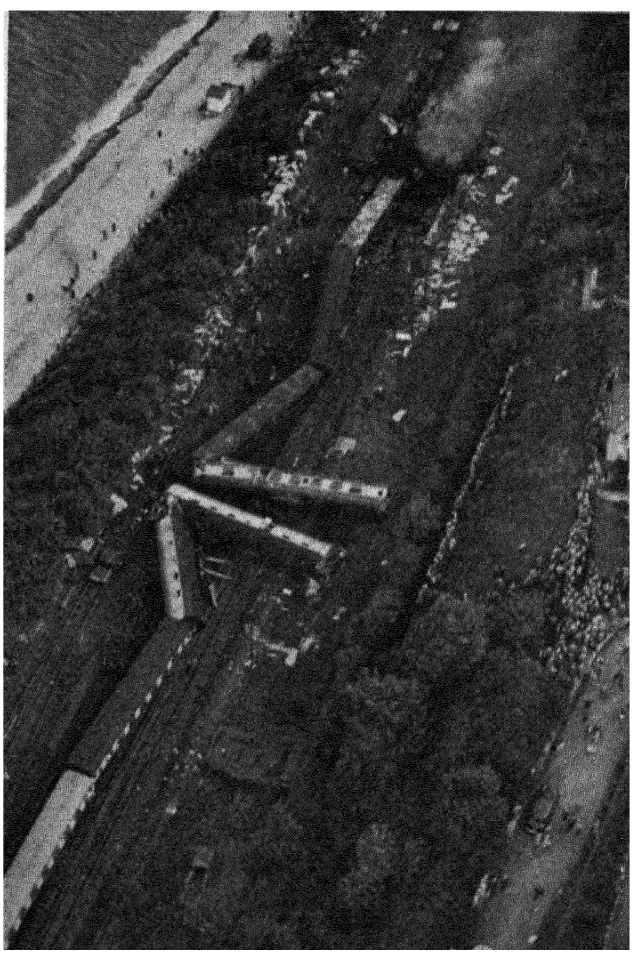
June 1 Khorassan province, eastern Persia. Thirty-six persons were drowned and 16 others were missing in floods that washed away 932 houses in an area around Meshed, the provincial capital.

June 9-11 Near Tokyo. Floods and landslides caused widespread damage; thirty persons were known to be dead and 20 missing among 70 railway workers buried in one slide, and hundreds of houses were swept away by high waters.

June 10-16 Darjeeling area, India. Heavy rains caused floods and landslides which resulted in the death of more than 100 persons.

June 25 North-central West Virginia, U.S. Rapid flooding of several rivers over an area nearly 100 mi. wide resulted in the deaths of at least 33 persons and property damage amounting to several million dollars.

July 9-11 Northeastern Colombia. About 150 persons died in a series of violent earthquakes that wrecked many mountain villages.



Wrecked coaches of the Holyhead-Euston mail train which crashed at Penmaenmawr, North Wales, Aug. 27, 1950.

Aug. 3 El Tocuyo, state of Lara, Venezuela. Severe earth tremors virtually demolished this community of 7,000 causing 100 deaths.

Aug. 6 Eastern Japan. At least 40 persons were missing in severe floods in Ibanki prefecture, Nineteen were killed, 58 were missing, and 196 were injured in all eastern Japan, according to one government survey.

Aug.-Sept. Anhwei and Kiangsu provinces, China. Nearly 10 million persons were affected by floods of the Hwai river, which had killed 489 persons, damaged or destroyed 890,000 houses, and ruined crops on 3·7 million ac. of farm land.

Aug. 15-27. Northern Assam, India. A severe earthquake followed by lesser tremors and by floods devastated large areas of northeast India, caused 577 deaths; left about 5 million people homeless; destroyed crops and other property and threatened permanent damage to agricultural lands and other natural resources.

Sept. 4 Osaka and Kobe, Japan. The worst typhoon for nearly 20 years swept these areas, leaving according to various reports between 200 and 250 persons dead, 236 missing, 5,648 injured and tens of thousands homeless.

Sept. 15 Camiguin island, off northern Mindanao, Philippines. A sudden eruption of Hibok Hibok volcano left 84 persons dead of burns or suffocation from hot ashes and gases.

Sept. 25-26 Seffrou, south of Fez, French Morocco. A cloudburst and floods almost destroyed this small town and caused over 70 deaths.

Sept. 29 Surte, near Gothenburg, Sweden. This village of 2,000 inhabitants was swept into the river Goeta by a landslide; there was, however, only one fatal casualty.

Sept.-Oct. West Punjab, Pakistan. Serious flooding of the Chenab, Ravi and Sutlej rivers inundated 2·4 million ac. of agricultural land, drowned over 10,000 head of cattle and destroyed thousands of homes.

Oct. 14 Rosso, Senegal river basin, French West Africa. Ten thousand persons were reported homeless as the result of floods.

Oct. 21 Santa river, Peru. Thirty persons were killed at least 100 were missing and 28 were injured in a landslide of mud and water which resulted when the Pisococha lagoon collapsed.

Nov. 25-28 Northeastern U.S. Snow blizzards in this region caused damage estimated at about $400 million and resulted in the deaths of 295 persons.

Rail

Feb. 17 Rockville Center, New York. Thirty-two persons were killed and more than 100 were injured when two Long Island railroad passenger trains collided head-on.

April 6 Near Tanguá, Brazil. At least 110 persons were reported dead or missing after several coaches of a train had plunged into the Indios river from a bridge whose foundations had been weakened by flood waters.

May 7 Near Jasidih, Bihar, India. Eighty-one persons were killed and 78 were injured when the Punjab Mail was derailed by what was thought to be sabotage.

June 8 Near Beattock, Dumfries. Five passengers aboard a Birmingham-Glasgow express were burned to death when the first three coaches of the train caught fire.

July 3 Saint-Amour, near Bourg-en-Bresse, Ain, France. Twenty-five persons aboard an excursion bus were killed when the bus was struck by the Paris-Annecy express train.

July 12 Near Zwickau, Saxony. Twenty people were killed when a passenger train crashed into a stationary freight train.

Aug. 27 Penmaenmawr, near Conway, Caernarvonshire. Six persons aboard the passenger train "Irish Mail" were killed and 35 were injured when the train collided with a shunting engine.

Sept. 3 Gurdaspur, northern Punjab, India. Twenty persons were killed and 45 injured when the Kashmir Mail was derailed.

Sept. 6 Near Pantojo, São Paulo state, Brazil. Thirty persons were killed and more than 50 were injured in a train wreck.

Sept. 9 Bhairabazar, East Bengal, Pakistan. About 50 persons were killed when the locomotive and the first three coaches of the Dacca-Chittagong express were derailed and plunged into a river; sabotage was suspected.

Sept. 11 Coshocton, Ohio. A Pennsylvania railroad passenger train crashed at high speed into the rear of a troop train carrying members of the Pennsylvania national guard to camp; thirty-three guardsmen were killed and 67 injured.

Nov. 22 Richmond Hill, New York. Seventy-eight persons were killed and 203 were injured when an eastbound Long Island railroad express crashed into the rear of a stationary train.

Road

Jan. 10 Colmar, France. Sixteen men and two women were drowned when a bus crashed through the railing of a bridge and plunged into a canal.

July 1 Casablanca, Morocco. At least 20 persons died when a bus caught fire after colliding with a truck.

Sept. 22 Tanganyika. At least 19 Africans were killed when a bus crashed over an escarpment on the Songea-Njombe road in the southern highlands.

Oct. 4 Mombasa, Kenya. Seventeen people were drowned when a private bus taking guests to an Indian wedding fell into 40 ft. of water at a ferry.

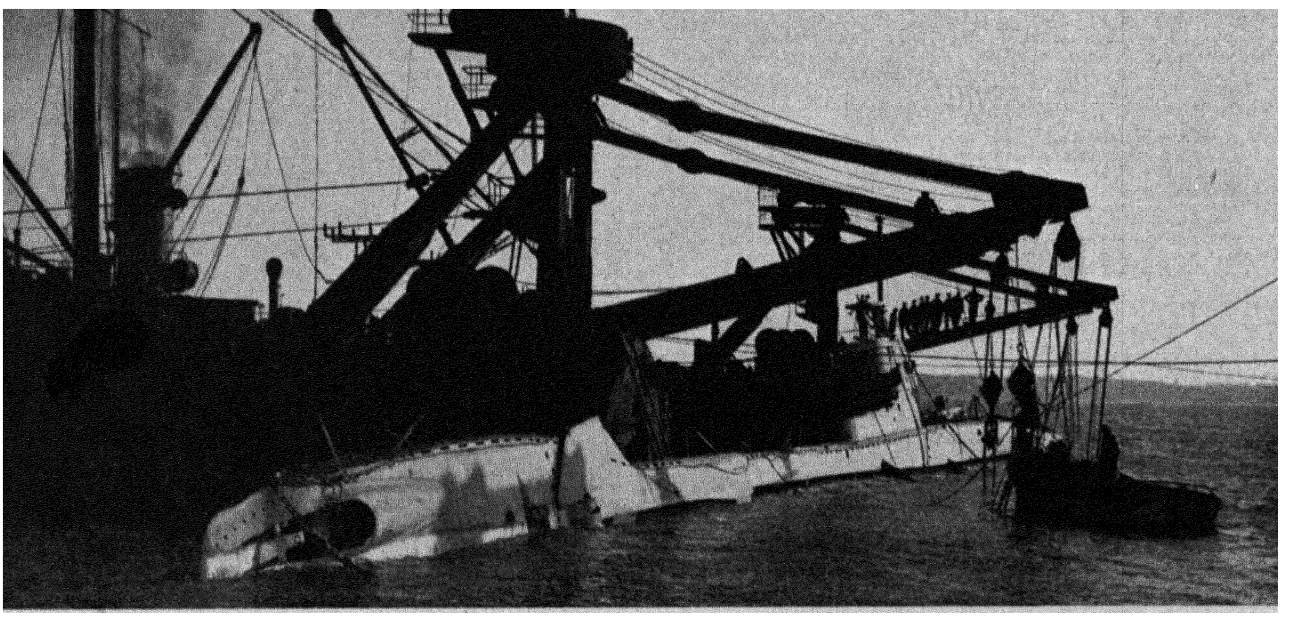
Sea

Jan. 12 Thames estuary, England. Sixty-four men died in the sinking of the British submarine "Truculent," after it had been rammed by the Swedish motor tanker "Divina."

Feb. 28 Off western Iceland. Twenty-seven members of the crew of 50 of the British tanker "Clam" died when their lifeboats capsized; the ship, being towed by a tug to Wales for repairs, parted her towline and broke up on rocks off the Iceland coast.

April 5 Oporto, Portugal. About 60 persons were missing or dead after a ferry had capsized on striking a submerged quay.

April 20 Off Dairen, Manchuria. The U.S. vessel "California Bear" collided in a fog with a ship flying the Chinese Communist flag, sinking it with an estimated loss of 70 lives.



The wreck of H.M.S. "Truculent" being beached in March 1950. On Jan. 12, 1950, she collided in the Thames estuary with the Swedish motor-tanker "Divina" and sank with the loss of 64 lives.

May 1 Near Calcutta, India. Fifty policemen were drowned when three police boats capsized.
June 19 Red sea, south of Suez. The cargo ship " Indian Enterprise," with a load of explosives, blew up; there was only one known survivor among the 74 persons aboard.
June 22-23 North sea, off Schleswig-Holstein. All 14 members of the crew of the replica Viking ship " Ormen Friske " were drowned when the vessel capsized in a storm.
July 27 Inland sea of Japan, off Hiroshima prefecture. A live torpedo, caught in the net of a fishing boat, exploded as it was drawn aboard, killing 30 fishermen and injuring 10 others.
Aug. 20 English channel. Ten London sea scouts and scout officers were drowned when their whaler " Wangle III " was wrecked while sailing from Calais to Ramsgate.
Aug. 22 Off Redodela island, Pontevedra estuary, Spain. Forty-nine holiday campers were drowned when a launch capsized.
Aug. 25 Off San Francisco. The U.S. navy hospital ship "Benevolence" with about 526 aboard, was rammed and sunk by the freighter, " Mary Luckenbach "; 504 persons were rescued.
Aug. 29 Northwest coast of Ceylon. It was reported that 500 fishermen were either lost or missing as a result of storms that dispersed a fishing fleet.
Sept. 16 Baie de la Fresnaie, off St. Malo, France. The French navy weather ship " Laplace " sank after striking a drifting mine; 51 persons aboard the ship were lost and 71 were rescued.
Nov. 15 Near Orašje, Yugoslavia. Ninety-four persons were drowned when a crowded ferryboat overturned on the Sava river.
Sept. 21 Off Honshu, Japan. Fifty-three members of the crew of a Japanese fishing vessel were presumed to have died when the ship was lost after radioing for help.

Miscellaneous

April 13 Hardwar, India. Thirty persons were trampled to death as an estimated 2 million pilgrims rushed to immerse themselves at a supposed sacred period in the " pool of immortality " on the Ganges river.
May 21 Cavarzere, Italy. Fifteen children were drowned when a footbridge over a canal collapsed while a religious procession was crossing it.
Sept. 7 New Cumnock, Ayrshire. Thirteen miners were lost but 116 were rescued after a rain-soaked surface area caved into the Knockshinnoch Castle colliery.
Nov. 24 Poza Rica, eastern Mexico. Twenty-two persons were killed, 60 others were seriously poisoned and more than 200 were affected by an unidentified poisonous cloud of gas and industrial smoke that swept over this oil refinery town.

DISPLACED PERSONS: *see* REFUGEES.

DISTILLING: *see* SPIRITS.

DIVORCE: *see* MARRIAGE AND DIVORCE.

DIXON, SIR OWEN. Australian lawyer and United Nations official (b. Hawthorn, Victoria, April 28, 1886), was educated at Hawthorn college, Melbourne, and the University of Melbourne. In 1910 he was called to the bar in Victoria, and 12 years later was appointed a King's Counsel. Made a justice of the High Court of Australia in 1929, he served in this post until in 1942 he was appointed Australian minister in Washington. He returned to the Australian High Court in 1944. He was chairman of a number of government committees including the Central Wool committee, Shipping Control board, the Commonwealth Marine Risks Insurance board and the Salvage board. In 1942 he was chairman of the Allied Consultative Shipping council in Australia. On April 12, 1950, the Security council, by 8 votes to 0, appointed him United Nations representative for India and Pakistan (*qq.v.*) to supervise the demilitarization of Kashmir (*q.v.*). Sir Owen arrived in the sub-continent on May 27, visited New Delhi for talks with the Indian prime minister, Pandit Nehru, and Karachi for talks with the Pakistan prime minister, Liaquat Ali Khan, and travelled extensively in Jammu and Kashmir. From July 20 to 24 he held a conference in New Delhi with both Pandit Nehru and Liaquat Ali Khan and later further talks were held in both Karachi and New Delhi. The talks broke down and on Aug. 21 Sir Owen announced that his mission had failed. When he left the sub-continent on Aug. 23, he said that neither India nor Pakistan were able to make any suggestions and all proposals rested throughout on him. He presented his report to the Security council on Sept. 15. He was created a K.C.M.G. in 1941.

DIXON, SIR PIERSON JOHN, British diplomat (b. Englefield Green, Surrey, Nov. 13, 1904), was educated at Bedford school and Pembroke college, Cambridge, of which he was a fellow, 1927 and 1928-29. After a period at the British school at Athens, 1927-28, he entered the Foreign Office in 1929. He served at Madrid, 1932-36, Ankara, 1936-38, and Rome, 1938-40, then returned to London in the latter year and acted as chargé d'affaires to the Greek government in London at various periods in 1941-42. He was principal private secretary to the secretary of state for foreign affairs, 1943-48, and in Jan. 1948 became ambassador in Prague, thus arriving in Czechoslovakia just before the Communist *coup d'état*. In the 1950 New Year Honours he was created a K.C.M.G. and in March succeeded Sir Miles Hubert Gladwyn Jebb (*q.v.*) as deputy under secretary of state for foreign affairs.

DOCKS AND HARBOURS. The second annual report of the British Transport commission, covering 1949, was published in 1950 and recorded a deficit of £900,000 in the operation of docks, harbours and wharves before making any contribution to central charges. The improvement of nearly £500,000 over the first year's result was due largely to increased tonnages. Higher charges were authorized. The docks at the Hartlepools and at Middlesbrough had been transferred from the Railway executive to the Docks and Inland Waterways executive on March 1, 1949; those at Garston and Fleetwood on Dec. 1, 1949; and those at Barrow, Silloth, Lydney, Grangemouth, Alloa, South Alloa, Bo'ness, Charlestown, Ayr, Troon, Methil, Burntisland, Pettycur and Tayport on Jan. 1, 1950. The principal works for the executive's docks authorized during 1949 were estimated to cost £251,600. The further mechanization of port operations was especially studied.

In March 1950 the National Dock Labour board published a review recording its experience of the operation of the Dock Workers (Regulation of Employment) scheme during the first two and a half years since its inception in June 1947. In 1949 exports had increased by 10% over 1948 and there was also some increase in imports. Employment, as a percentage of men on the workers' register, increased from 73·3% in 1948 to 75·6% in 1949: the percentage of men proving attendance but not allotted work decreased from 11·9% to 9·5%. There were strikes at London in April 1949 and again in June and July 1949. Altogether during that year 21 ports were affected by strikes and 441,858 man-days were lost.

Trade slackened somewhat between mid-August and mid-Sept. 1949 prior to the devaluation of the pound. Gross earnings per week, averaged over all workers, amounted to £8 8*s.* 11*d.* in 1949 against £7 19*s.* 11*d.* in 1948. The total number of registered workers in Dec. 1949 was 74,850 against 75,809 in 1948. At the inception of the scheme the board had inherited a labour force of some 78,500 men.

Clyde. The Docks and Inland Waterways executive conducted a review of the trade harbours of the Clyde area and, subsequently, the British Transport commission decided that a scheme of unification should be prepared. The proposed scheme might affect the ports of Glasgow, Ayr, Troon, Ardrossan and Greenock. The Clyde Navigation trust announced that work would shortly commence on their scheme for a new £9 million tidal dock near Shieldhall, Glasgow, which would take seven to eight years to complete.

Leith. A licence for a seadrome for flying boats at the port was issued. A weekly flying-boat service was instituted between Leith, Glasgow, Belfast, Southampton, Scilly Isles and Falmouth, but this had to be discontinued owing to lack of support.

Liverpool. The widening of the Langton-Brocklebank passage was advanced. It was decided to provide a new iron-ore berth at Bidston dock. Work on the Training Bank scheme proceeded steadily. Statutory powers were obtained to borrow £12 million for various works and to increase rates and dues if necessary.

London. Further details were published concerning the model being constructed by the Port of London authority to enable a full study to be made of the problem of silting on the River Thames: a pilot model had been built to reproduce the river as it was in 1830-34. The restoration of war-damaged transit and warehouse accommodation was continued and arrears of maintenance, from the war years, were further reduced. A start was made on some major schemes of reconstruction and also on the improvement of the authority's mechanical and floating equipment by conversions, replacements and additions. Contracts were let for 82 electric quay cranes and 7 tugs, whilst 33 diesel mobile cranes, and much other equipment, were acquired.

Southampton. The dredging of the harbour, estimated to cost £624,000 and to take 20 months, was commenced. A new ocean terminal was opened by Clement Attlee, the prime minister. Alongside accommodation was provided for the world's largest liners.

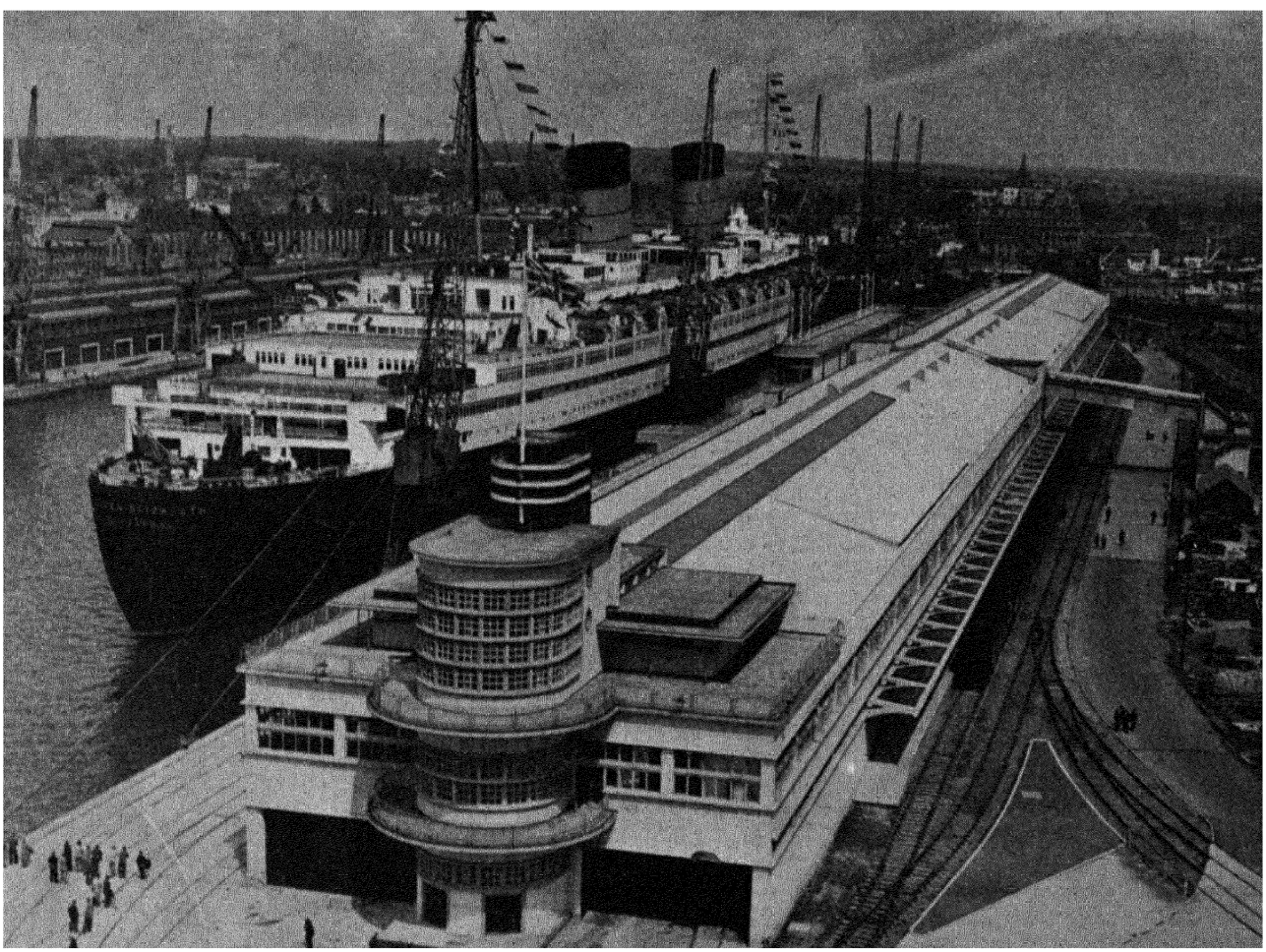
Sunderland. Schemes for an improved dock entrance, a river quay extension and a cold store were submitted to the minister of transport but approval was withheld because of the restrictions on capital investment. The River Wear commissioners celebrated the centenary of the opening of the main Sunderland dock system. A shore radar station was opened at Sunderland by the minister of transport. Further progress was made with the £800,000 port development scheme commenced in 1948.

Tees. The Conservancy commission completed the first stage of their development scheme by opening the first of two deep-water oil berths at Teesport and also the new Tees Dock road to serve the berths. It was announced that, because of limitations on capital expenditure, the remaining schemes would be held in abeyance. Discussions continued on the British Transport commission's proposals for combining the ports of Middlesbrough and the Hartlepools.

Tyne. The Tyne Improvement commission decided to extend the Sutherland quay to accommodate 20,000-ton iron ore vessels and to provide, on the quay, a battery of 10-ton grabbing cranes, hoppers, conveyor belts and storage bunkers for the ore. The project would cost £1 million. The commissioners celebrated the centenary of their constitution on Sept. 20, 1950.

Belfast. The harbour commissioners took powers to carry out development, reclamation and improvement works envisaged for the next 20 years.

Australia. A dredging contract at Melbourne harbour was secured by two Dutch firms and the work was expected to take two-and-a-half years to complete. Progress was made with the new Appleton dock at Melbourne and plans were



R.M.S. "Queen Elizabeth" alongside the new ocean terminal at Southampton on July 31, 1950, when the terminal was opened by the prime minister, Clement Attlee.

developed for the new river entrance docks. Work began upon the construction of a deep-sea port at Iluka at the mouth of the Clarence river: the cost would be £3 million covering dredging, the removal of a reef and the construction of a breakwater and wharves. At Sydney remodelling of the wharf accommodation, estimated to cost £A 5 million, was begun.

British East Africa. At Dar es Salaam the construction of two deep-water berths and ancillary works was put in hand at the probable cost of £1,500,000. The first berth would be ready at the end of 1951. The Belgian government gave consideration to a scheme for spending £1 million on its own account, for the construction of a deep-water berth for Belgian vessels at this port.

Ceylon. Work was begun on the first stage of the Colombo port development scheme, to Rs. 54 million. The first stage was to provide alongside berths for cargo vessels and modern facilities and equipment for rapid cargo-handling.

France. At Nantes, a floating dock of 12,000-ton lifting power was received from Kiel as part of the German war reparations. A new port of Paris, which would eventually cover nearly 1,000 ac. was opened: six docks were contemplated, of which one had been completed; the new port would allow traffic between the Marne and the lower Seine to save 22 mi. and avoid a lock and about 40 bridges. It was decided to construct a new oil basin at Le Havre.

French West Africa. Construction of a modern port proceeded at Abidjan on the Ivory Coast. Piers, quays and an equipped inner harbour were to replace the existing surf port. The work would take two to three years.

India. Consideration was given to the formation of a Ports board for India similar to the Railway board, one of the objects being better co-ordination between different ports. The Indian government took over the port of Kandla, in the Gulf of Cutch, and development works at this place were further advanced. At Bombay, the port administration reported an unprecedented increase in the volume of imports and the greatest congestion in the history of the port; the construction of a new warehouse and three new transit sheds was commenced; plans and estimates were approved for the provision of greater facilities for lighterage traffic; labour was no longer casual and an incentive bonus scheme introduced; and a long-term development programme was drawn up, providing for new ferry berths, a new entrance lock, an additional dry dock, better roads and a pier extension. At Calcutta, work proceeded on a new mechanical coal-loading plant to deliver 500 tons an hour, and further consideration was given to a future development programme including the replacement of wartime sheds, modernization of crane equipment, provision of new harbour craft and a 200-ton crane, the extension of King George's dock and the improvement of the port approaches.

Indonesia. The government announced that a new port on the east coast of the southern tip of Sumatra would be built soon.

Ireland. Authority was given for the rehabilitation of Fenit pier and harbour, about 8 mi. from Tralee, County Kerry. The port had been derelict since 1943. There was a prewar import trade amounting to about 100,000 tons and the sum of £159,031 would be spent to restore the facilities.

Israel. It was decided to build a new fishing harbour at Neve-Reuven, south of Tel Aviv in order to relieve the latter port of congestion caused by the fishing fleet.

Netherlands. An exhibition covering 100,000 sq.ft. was held at Rotterdam to illustrate dredging and harbour activity, Rhine and inland navigation, and trade and industry. At Amsterdam, the dry dock "Hendrik," sunk in 1944 and capable of lifting 25,000 tons, was salved and put back into service.

New Zealand. Further consideration was given to development plans for the port of Auckland: statutory authority was obtained for vesting in the harbour board 6,900 ac. of the harbour bed. Also at Auckland a scheme for a harbour bridge was mooted and consideration was given to its financing. Work continued at Wellington on a three-year improvement scheme to cost £500,000, to cover new sheds, coal-handling equipment and roads: preliminary consideration was given to a £1-million proposal to construct a new wharf at Aotea quay. At Whakatane, plans for a deep-water harbour to cost £1 million were considered: the project included diversion of the Whakatane river, the reclamation of 600 ac. of land and the construction of railway yards; the main object was to provide an outlet for timber products from the proposed mills at Murupara.

Pakistan. The short-term plan for the development of Chittagong was completed, thus doubling the capacity of the port. The long-term plan, to enable Chittagong to handle the whole traffic of Eastern Pakistan, was expected to be executed in three years' time.

Portuguese East Africa. A 20-yr. convention was signed in Lisbon for the Portuguese, United Kingdom and Southern Rhodesian governments. It provided for the improvement of the port of Beira, for avoidance of delays to shipping and to rail traffic, and for a combined effort to maintain sufficient traffic at Beira to ensure economic working. The Portuguese government decided to spend extensively on improvements at the existing ports of Mozambique and made further progress with the construction of the new port at Nacale.

Sweden. It was decided to spend £2,140,000 on improvements at Helsingborg, principally to increase the facilities for bulk cargo and oil.

Yugoslavia. Work proceeded on a new harbour at Ploce, to the west of the mouth of River Neretva on the Adriatic coast, where a former fishing haven was being converted into a commercial terminal. (A. H. J. B.)

United States. During the fiscal year ended June 30, 1950, $197,985,690 of federal funds was expended for new work and maintenance of river and navigation projects and inland and coastal harbours. The Rivers and Harbours act of 1949, including supplementary appropriations, provided $186,142,500 for maintenance and improvement of the nation's rivers and harbours. Of this total $113,760,500 was intended for new construction work on 51 projects in 30 states, the District of Columbia and Alaska.

Work continued at the port of Houston on a $9 million improvement programme. The Alabama state docks at Mobile were brought into service after two and a half years work, $4,250,000 having been spent on them, the object being to increase the berthing capacity of the terminals to 25 ships. Progress was made with a new terminal at Los Angeles covering 8 ac. and expected to cost $3,400,000: the main feature was a new passenger and cargo shed which was to be one of the largest ever built. At the port of Oakland on the eastern shore of San Francisco bay, California, it was decided that future piers were to be from 500 ft. to 800 ft. wide to allow adequate quay space and for railways, roads and sheds; that the outer harbour should be enlarged by two mole-type piers providing berths for 18 vessels; and that the inner harbour should be developed adding new facilities for the accommodation of vessels and goods. (X.)

Canada. Figures published in 1950 revealed that total tonnages handled by national harbours in 1949 were 6% greater and revenues were 10% higher than in 1948. Nevertheless 1949 operations resulted in a net deficit of $1,493,517. Vancouver harbour claimed first place in radar harbour control, with 53,000 vessels using its Lion's Gate system in 1949. London marine underwriters made a one-third reduction in the scale of minimum additional premiums on hull

insurance rates on ships trading into Port Churchill, which was open an extra 10 days (total of 77 days) in 1950. The port of Montreal announced a 40% increase in 1950 tonnages over those of 1949. (*See* CANALS AND INLAND WATERWAYS.) (C. CY.)

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DOIDGE, FREDERICK WIDDOWSON, New Zealand statesman (b. Auckland, New Zealand), was educated in Auckland and soon entered journalism. He served as a reporter on the *Patea Press* and the *Auckland Star* and at the age of 21 represented the *Star* in the parliamentary press gallery. In World War I he served in the army in France and then in the Ministry of Information in London. After the war he stayed in London and later became a director of the Express group of newspapers under Lord Beaverbrook. In 1935 he retired from newspaper work and returned to New Zealand. In the same year he stood as an independent for parliament at Rotorua but was defeated. In the next year he was elected as a member of the National party for Tauranga and held the seat in each of the following general elections. After the National party victory on Nov. 30, 1949, he was appointed minister of external affairs and minister of island territories in the S. G. Holland cabinet. Soon after taking office he attended the first meeting of Commonwealth foreign ministers which was held at Colombo, Ceylon, in Jan. 1950. On his return he visited Jakarta and was received by President Sukarno. In May he attended the Commonwealth conference on aid to southeast Asia in Sydney, and in June visited Fiji, Tonga, Western Samoa and the Cook Islands. In a review of world affairs to the House of Representatives on Sept. 5 he outlined New Zealand's three tasks: to defend herself and her dependent territories, to carry out her obligations as a member of the Commonwealth and to join the United Nations in collective measures against aggression. On Sept. 12 he left New Zealand for conferences in London on Commonwealth aid to Asia and also to attend the fifth general assembly of the United Nations at Flushing Meadow, New York.

DOMINICA: *see* WINDWARD ISLANDS.

DOMINICAN REPUBLIC. West Indian republic covering the eastern two-thirds of the island of Hispaniola or Haiti. Area: 19,129 sq.mi. Pop.: (1935 census) 1,479,417; (mid-1950 est.) 2,400,000. Racial distribution is estimated at 13% white, 68% *mestizo* and mulatto and 19% Negro. Spanish is the language, and the predominant religion is Roman Catholic. Ciudad Trujillo (known as Santo Domingo from the time of Christopher Colombus until 1936) is the capital, with a population (1949 est.) of 165,000. President (in 1930-38 and from 1942), Generalissimo Rafael Leónidas Trujillo y Molina.

History. The foreign demand for sugar, cocoa and coffee continued throughout 1950. The bulk of Dominican sugar was exported to Great Britain as before; most of it had been contracted for by the time the events in Korea sharply stimulated the demand for sugar and related products at increased prices. During the first nine months of 1950, exports in value aggregated $68 million, or $9 million more than in the same months of 1949, but in volume were only slightly greater.

The year 1950 witnessed considerable expansion in public works undertaken as well as the completion of others begun earlier. Almost every part of the republic was linked to the capital by dependable roads. The addition of more than 11,600 ac. under irrigation, through the completion of a large dam, brought to nearly 200,000 ac. the area reclaimed since 1930. Hospitals, schools and other essential buildings were completed in increasing numbers in 1950, and a five-year programme of constructing several thousand workers' model houses was begun. Water systems and sewerage plants, small electrical plants and harbour facilities were completed in a number of places, in turn stimulating private construction everywhere.

The foreign relations of the Dominican Republic were uneventful during 1950. The Dominican government maintained a discreet silence with respect to the Puerto Rican nationalist outbreak, in significant contrast with pro-Soviet demonstrations in Cuba. (C. McG.)

Education. Schools (Dec. 1948): elementary and secondary, state 2,387, state-aided 53, private 136; total number of pupils 242,545. There was also a state university at Ciudad Trujillo.

Agriculture. In the 1949-50 season (Sept.-Aug.) 523,951 short tons of raw and refined sugar were produced; sugar exports amounted to 487,100 short tons in the calendar year 1949. Production of molasses totalled 23,947,420 gal. in 1948. Other important crops were cocoa (1949-50: 36,500 short tons) and coffee (1948-49: 347,550 bags of 132 lb. each). In 1946 there were 597,000 cattle, 547,000 pigs, 346,000 goats and sheep and 1,988,000 poultry.

Foreign Trade. Exports in the year 1949 were valued at $73·7 million; imports at $46 million. Chief exports were sugar (53%), cocoa (12%), coffee (10%) and leaf tobacco (8%). Leading customers were the U.K. (42%), the U.S. (28%) and Canada (4·2%). Leading suppliers were the U.S. (75%), the Netherlands Antilles (6%), Canada (5%) and the U.K. (4·6%).

Transport and Communications. There were 170 mi. of state railway and about 650 mi. of industrial railway operated by the sugar companies. In 1949 surfaced highways amounted to 500 mi., other roads to 2,500 mi. In 1948 there were 3,124 cars and 2,390 lorries. In 1948 there were 2,408 telephone subscribers and about 20,000 wireless receiving sets.

Finance. The monetary unit is the *peso*, officially pegged at par with the U.S. dollar. There was no external debt. Notes in circulation on Oct. 31, 1950, amounted to $23·8 million and gold reserve $4 million. (J. W. Mw.)

DONATIONS AND BEQUESTS. The continued high rate of death duties prevented any large bequests and in many cases large estates were broken up in order to pay death duties. (During the year Viscount Portman handed over to the Commissioners of Inland Revenue his Dorset estate of 3,800 ac. as a part payment of duties totalling about £3,369,000 which became payable after the death of his father, the 7th Viscount, in Sept. 1948.)

In January the prime minister appointed a committee, under the chairmanship of Lord Nathan, with the following terms of reference: " To consider and report on the changes in the law and practice (except as regards taxation) relating to charitable trusts in England and Wales which would be necessary to enable the maximum benefit to the community to be derived from them." The committee held its first meeting late in January.

The lord mayor of London, Sir Frederick Rowland, launched on March 21 a National Thanksgiving fund to express the United Kingdom's gratitude for the gifts of food parcels and bulk food supplies received during and after World War II from the peoples of the Commonwealth and the United States; the fund would provide accommodation in London for Commonwealth and U.S. students. The target for the fund was £2 million and by Nov. 1 about £720,000 had been donated.

Among the grants to Oxford university was one of £100,000 from the Nuffield foundation for two additional fellowships of Nuffield college. Viscount Nuffield said in July when he received an honorary degree at the Queen's university, Belfast, " my pocket is getting empty " and that he would not make any more gifts for some time. It has been estimated that he had given away nearly £30 million.

The Pilgrims made donations during the year to the Friends of Bath Abbey Restoration fund and for the restoration of the Dickens house, Bloomsbury, London.

The Maharaja of Baroda formed from his private properties two trusts, the Maharaja Sayajirao University of Baroda trust and the Baroda Territory Rural Uplift trust, each with a fund of £750,000.

In Canada, W. L. Mackenzie King, former prime minister, left about $750,000. The greater part of his estate was dedicated to public purposes. His home in Ottawa, Laurier house, previously the home of Sir Wilfrid Laurier, was bequeathed to the Canadian government in the hope that history students would be allowed to use it. The lands and houses at Kingsmere, his country estate, were bequeathed to the government as a public park. The will of the late Joseph E. Atkinson, publisher of the *Toronto Daily Star* provided for a charitable trust, the Atkinson Charitable foundation. A sum of $3 million was passed to the trust from his estate in July 1950.

The Ford foundation, set up in 1936 by Edsel Ford, had obtained his non-voting stock in the Ford Motor company on his death in 1943 (his personal estate, valuation of which was not completed until 1950, was £45·7 million). The foundation, with funds estimated at $238 million, was the richest public trust fund in the world. The first grants, announced on Oct. 1, totalled $3·5 million. Paul G. Hoffman, formerly head of the European Recovery programme, was appointed first president of the foundation. Mrs. Henry Ford, widow of Henry Ford, died in 1950 and left about $8·5 million. Nearly half of this she bequeathed to the Edison institute for educational purposes.

DRAMA: *see* THEATRE.

DRAWING AND ENGRAVING. The renaissance which drawing and engraving enjoyed in France and the U.S. failed to reach Great Britain where copper-engraving was still neglected. In four of her eminent painters France also had outstanding engravers; Georges Rouault, primarily an etcher, André Masson, interested mainly in aquatint, A. Dunoyer de Segonzac and Pablo Picasso (experimenting like Rouault in numerous techniques) all produced admirable engravings, Picasso's finest being the illustrations to Luis de Góngora's poems, and a " Faun " series of lithographs. Roger Vieillard, with his memorable illustrations to the *Chevalier de la Nuit*, was acknowledged France's finest line-engraver, and outstanding also was the engraver Joseph Hecht (with " Maître Renart ") who had always advocated a return to the early Italian technique and whose influence was apparent in Great Britain. Others profiting by healthy book-production were Léon Gischia, Jacques Houplain and Antoni Clavé.

Prominent among the many U.S. engravers, Misch Kohn produced formalistic wood-engravings which (like the large copper plates of Lazansky) showed Parisian tendencies.

Though British production was small in quantity, some of the work had seldom been surpassed in quality. Plates executed by Gertrude Hermes (" The Warrior's Tomb " and " Undercurrents "), Blair Hughes-Stanton, John Farleigh and Leon Underwood (experimenting with coloured lino-cuts) exhibited a superlative fusion of imagination and technical skill. Of the four engravings associated with the seasons which were commissioned by the Victoria and Albert museum —from Underwood (spring, " Persephone's Return "), Farleigh (summer) Edmund Bawden (autumn) and Hermes (winter)—the second and fourth were especially notable.

The Golden Cockerel press edition of Swinburne's peom *Pasiphae* contained some of the most imaginative of John Buckland-Wright's copper engravings. The plates of Richard Hamilton, and the wood-engravings of Roderick Barrett (in sympathy with symbolic realism) also deserve mention. The dearth of copper-engravings in Great Britain contrasted with the flourishing state of the lithograph which, to the engraver's disadvantage, satisfied the growing demand for colour-reproduction. Barnett Freedman, Robert McBryde, Robert Colquhoun, John Piper, Michael Ayrton, Keith Vaughan, Graham Sutherland and William Scott were among those already distinguished as painters who produced admirable lithographs, applying the process to book-illustrations, commercial designs and independent plates.

Drawing also flourished in Great Britain. The highly individual drawings and engravings of the sculptors Henry Moore, Jacob Epstein and Barbara Hepworth and of the painters Augustus John and Anthony Gross (for reproduction as illustrations like those of Matisse in France) were frequently exhibited: Barbara Hepworth's notably in Venice and Moore's in Berlin, Stuttgart and elsewhere.

The most informative cross-section of contemporary drawing was the International Exhibition of Modern Drawings held at Bergamo, Italy, with some 450 drawings by 86 artists from 11 countries. There was a high proportion of abstractions, and many of the most interesting were the work of sculptors.

Copper-plate engraving had distinguished Spanish exponents in Pablo Riu (dry point) and Figueras (etching), and the Belgians Françoise Wauters and Holland Ru van Rossem produced line-engravings on musical themes. Of German engravers Emil Nolde helped to maintain the interest in German Expressionism. Finland's acknowledged leader in graphic art was Rolf Sanqvist, lithographer and engraver in most techniques. Political barriers maintained and, after the absorption of Czechoslovakia into the Russian orbit, intensified ignorance of production in eastern Europe, but the wood-engraver George Buday produced some vigorous plates after leaving Hungary for Great Britain. (*See* also ART EXHIBITIONS; MUSEUMS.) (N. A. D. W.)

DRESS: *see* FASHION AND DRESS.

DRUGS AND DRUG-TRAFFIC: *see* NARCOTICS.

DUVIEUSART, JEAN, Belgian statesman (b. Frasnes-lez-Gosselies, Belgium, April 10, 1900), was educated at the Jesuit college at Charleroi and at the University of Louvain. A lawyer, he was elected mayor of his native town in 1927 and held this office for 19 years. He entered national politics after the liberation, was elected in 1946 Social Christian deputy for Charleroi and re-elected in 1949 and 1950. He joined the government on March 19, 1947, as minister of economic affairs, retaining this portfolio in the two successive Spaak cabinets and the Eyskens cabinet (Aug. 1949-June 1950). On June 8 Duvieusart, a French-speaking Walloon, formed a purely Social Christian cabinet to bring King Leopold (*q.v.*) back to the throne. However, after the royal prerogatives had been deputed to Prince Baudouin (*q.v.*), Duvieusart resigned on Aug. 11. He was criticized in his party as being insufficiently enthusiastic for King Leopold.

DYESTUFFS. In 1950 the Association of British Chemical Manufacturers made public the text of a survey of the British chemical industry that it had compiled at the request of the president of the Board of Trade. Considerable attention was given to the dyestuffs industry; and in the chapter on future trends and expansion, information on proposed increases of production and replacement of equipment (other than normal maintenance) over the next five years was set out in tabular form.

The new schemes would increase productive capacity in most classes of dyestuffs, except indigo.

Production of dyestuffs generally continued at a high level in 1950; and shortages, except for occasional delays in the delivery of specific items, had largely become a thing of the

past. During the year the Organization for European Economic Co-operation published two reports on exportable surpluses of chemicals in western Europe; from the tables in these it could be seen that ample quantities were available. Producers both in Switzerland and in Great Britain reported keener competition in export markets and severe difficulties in trading with eastern Europe and parts of Asia. On the other hand sales increased in some markets, particularly of the high-quality fast colours.

DYESTUFFS AND INTERMEDIATES

		Number	*Estimated Cost*
1.	Number of firms: 26 (15 dyemakers).		
2	Schemes in progress	26	£11,489,000
3.	Schemes awaiting licence	12	£3,094,000
4.	Schemes still tentative	21	£1,798,000
5.	All schemes	59	£16,381,000
	Amount already spent		£3,155,000
		Annual Tonnage	*Annual Value*
6.	Present productive capacity	195,700	£38,308,000
		50,000 (dyestuffs only)	£18,300,000 (dyestuffs only)
7.	Total productive capacity on completion of schemes	237,900	£52,610,000
		66,800 (dyestuffs only)	£26,730,000 (dyestuffs only)
8.	Decrease in imports	—	£1,219,000
9.	Increase in exports	—	£4,729,000
10.	Extra employees required: 2,330.		

SOURCE: *Report on the Chemical Industry, 1949*, Association of British Chemical Manufacturers, London, 1950.

The directors of the German Badische Anilin A. G. took advantage of the company's 85th anniversary to issue a progress report. This firm had been one of the units of I.G. Farbenindustrie, the chemical combine dissolved by Allied order. Badische once again became an independent company, although managerial functions and administration were in the hands of a French sequestrator. Reconstruction work (war damage was estimated at Rm. 400 million) was stated to have proceeded slowly; but about 300,000 cu.m. of waste had been disposed of. Badische re-employed all members of the staff returning from the forces, and about 500 patents were taken out between the end of World War II and the end of 1950.

Perhaps the most talked-of development in the application of dyes during 1950 was the Standfast continuous dyeing machine for vat dyes, in which the impregnation and fixation of the dyestuff was brought about by passage of the cloth through molten metal of a type that melts at a temperature under the boiling point of water. (L. E. Ms.)

United States. The greater industrial activity of all colour-consuming industries during the year 1950 was reflected in a marked increase in the production and sale of dyes. The rise started in the latter part of 1949 and continued strongly throughout the year. The national defence programme resulted in heavy consumption of certain types of fast dyes for colouring fabrics for the armed services. The necessity of allocating some of the more important raw materials to ensure an adequate supply of these colours was considered, but no actual steps were taken to put it into effect. The export situation showed a marked falling off in the consumption of U.S. dyes. This was attributed to the increased activity in foreign markets from other dye-exporting countries, and the loss of considerable business in the far east on low-priced tonnage products.

Research developed a range of dyes designed specifically to produce the highest possible light fastness on nylon and new or simplified application techniques for the colouration of the different hydrophobic and other types of synthetic fibres being manufactured. (A. G. BR.)

EAR, NOSE AND THROAT, DISEASES OF.

Allergy. Solomon Slepian reported that the best results can be obtained when the allergist and otolaryngologist (ear, nose and throat specialist) work together. Scratch tests, 15-20 at a time, or more sensitive intradermal tests are made, a careful history is taken and treatment instituted carefully. Offending foods should be avoided, pets discarded, pillows and mattresses covered with non-allergic material, and dust-laden curtains and rugs removed.

Treatment can be started with stock dust or stock vaccines, and if ineffective then with autogenous vaccines and autogenous dust. Small, carefully graduated doses of all hyposensitizing materials are advisable. Large polyps should be removed surgically, small polyps and polypoid degeneration may clear up under allergy treatment.

Deafness in Children. The amount of deafness is diagnosed by a combination of methods: (1) careful history; (2) spontaneous response (blinking, jumping, turning and locating); (3) learned or conditioned response (gross sound, voice and audiometer); (4) observations of the child's basic language ability; (5) psychometric evaluation; (6) vestibular function tests; and (7) galvonic skin resistance method. Donald K. Lewis concluded that of these the most important are history, conditioned response and psychometric evaluation.

The treatment consists of lip reading by special teachers at good centres with much training by the parents at home and the over-all supervision by an otologist interested in the work. Each of these is absolutely essential.

Chemical Burns of the Oral Cavity and Oesophagus. At the Sofia clinic in Bulgaria there were 1,221 cases of chemical burns over a period of 20 years (1928-47). Lye was responsible for most of the chemical burns of the oral cavity and oesophagus (in 979 cases) according to a study by Angel V. Stumboff.

The other chemicals causing burns were: hydrochloric acid, 39 cases; nitric acid, 62 cases; sulphuric acid, 107 cases; ammonia, 6 cases; tincture of iodine, 2 cases; phenol (carbolic acid), 1 case; potassium permanganate (potash), 2 cases; kerosene, 1 case; spirits of camphor, 1 case; various mixtures, 13 cases. There were three types of burns caused: first degree, 10%; second degree, 63%; and third degree, 27%. The third degree cases eventually died.

Evaluation of Irradiation of Pharyngeal and Nasopharyngeal Lymphoid Tissue. Francis L. Lederer expressed disapproval of the radium application, for children, in the treatment of deafness, asserting that irradiation can better be done with X-ray. Considering all of the available evidence, irradiation of the nasopharynx by the standardized techniques is without danger. It should, however, be used with restraint and in technically knowledgable hands. Its use is not a substitute for surgery and should be confined to those cases of conduction deafness associated with the proven presence of lymphoid hyperplasia, in and about the eustachian tube orifices. The syndrome of transitory hearing loss, allergic reactions and infection in the nose, sinuses or nasopharynx or both must be recognized and treated accordingly, in addition to being treated by irradiation. The importance of history-taking in relation to previous irradiation is stressed because of the possibility that a repeated series of treatments may produce untoward tissue changes.

Even in competent hands, no great advantage is to be had from over-irradiation. The simplicity of obtaining and carrying out the first form of therapy may, indeed, eventually lead to the harm which it is desired to avoid. The increasing prevalence of the routine post-operative irradiation of the nasopharynx is purely an admission on the part of the otolaryngologist that this operation (adenoidectomy) is technically inadequate. Histologically, all stages of degeneration in the lymphoid tissue may be demonstrated as a result of irradiation. This is then followed by varying degrees of reparative change from granulation tissue to localized areas of ossification in occasional cases. (*See* also COLD, COMMON.)

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EAST AFRICA HIGH COMMISSION. The commission was established in 1948 to administer the public utilities and other services, including research, which were of common concern to the British East African territories of Kenya, Tanganyika and Uganda. It has power to legislate, with the advice and consent of the East Africa Central Legislative Assembly, on any of the services for which it is responsible. The assembly is presided over by a speaker and consists of 7 *ex officio* members of the commission's staff, 1 nominated member from each of Kenya, Uganda and Tanganyika and 13 unofficial members partly nominated and partly elected and including Indian and African representatives.

The commission floated two loans, one for £3,500,000 and the second for £7,100,000, both for railway and harbour development. An extension of the commission's activities during the year was the establishment of a special locust control organization to operate separately from the desert locust survey. This resulted from the development of a very serious threat of locust invasion from the middle east. Delegates from the middle east came to Nairobi in July for a conference and plans were laid for a campaign estimated to cost £1 million a year for three years. Infestation was reported to stretch from Lake Chad to eastern India and it was feared that the escape of swarms from the Somalilands and Ethiopia into the territories was inevitable. In the second half of the year steps were being taken to organize the necessary international campaign. Chairman of the commission, Sir Philip Mitchell; administrator, Robert Scott. (*See* also KENYA; TANGANYIKA; UGANDA.) (K. G. B.)

EASTERN EUROPEAN ECONOMIC PLANNING. Although not a clearly defined area, eastern Europe from a geographical point of view includes all the countries lying east of Germany and Austria. The most vital part of the Soviet Union (only 23% of its area but over 70% of its population) also belongs to eastern Europe, but for the purposes of the present article only the countries lying between the so-called "iron curtain" and the existing western frontier of the U.S.S.R. are considered as belonging to the area concerned. It is, therefore, not a geographical or cultural, but rather a political, entity which is under review. It is under Soviet influence, has governments controlled by Communist parties and is comprehended by a uniform policy of economic planning. This definition excludes Finland, which succeeded in preserving its free political institutions, and Yugoslavia, which in June 1948 ceased to be a Soviet satellite, but it includes Eastern Germany. The seven countries of eastern Europe (Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Rumania) together cover an area of 392,301 sq.mi., more than four times the area of the United Kingdom, and have a combined population of 88·1 million. The area is less than 5% of the size of that of the U.S.S.R., but the population represents a number more than 45% of the population of the U.S.S.R. and is an important addition to the Soviet economic potential. In 1950 the estimated production of eastern European countries amounted to 103·4 million metric tons of coal (equal to 40% of Soviet production), 8·1 million tons of crude oil (22%), 26,660 million kwh. of electricity (31%) and 7·6 million tons of steel (27%). By 1955 these countries were expected to produce 143·7 million tons of coal (including 100 million tons from Poland), 14·8 million tons of crude oil (including 13·2 million tons from Rumania), 65,900 million kwh. of electricity and 13 million tons of steel.

Previous Attempts at Integration. Eastern Europe is not an economically self-supporting area. Before World War I it was divided between Tsarist Russia, the German and the Habsburg empires; it also included five independent kingdoms in the Balkans whose foreign trade was dominated by the two German empires. After Germany's military defeat in World War I, the dissolution of Austria-Hungary and the abandonment by Russia, engulfed by the revolution, of its western non-Russian lands, there was a new territorial settlement. Independent Poland and the Baltic states were restored, Rumania achieved unity, and Czechoslovakia and Yugoslavia were created as new states, while Austria and Hungary were made independent national entities. Political independence and territorial integrity for all eastern European nations was a step in the right direction, but none of the victorious great powers suggested to them that some sort of mutual economic association was necessary for prosperity and as a guarantee of peace.

Between the two world wars the western frontier of the Soviet Union was a political and economic barrier and Soviet trade with eastern Europe was negligible. Eastern European countries traded with Germany, western Europe and overseas countries. There was a basis for active commercial relations between Germany and eastern Europe, as the former was a natural market for the agricultural produce of the latter and a source of supply for manufactured goods and industrial equipment. These relations, however, were hampered by mistrust of German policy in all eastern European countries. Germany was interested in buying food and raw materials in eastern Europe but not in helping forward the industrialization of the area, for even before 1933 German imperialism regarded eastern Europe as its *Lebensraum*.

Compared with those in western Europe, eastern European standards of living were low. In the 1930s the average yearly income of a continental European was equivalent to £117, but it was over £175 in western Europe and only £79 in eastern Europe. In the last-named area 71% of the population earned their living from agriculture, compared with 29% in western Europe, but productivity expressed in output per acre was one-quarter of that of western Europe. This situation was attributable to lack of credits and machinery, of fertilizers and good roads and, above all, lack of progressive methods of farming and of comprehensive planning. Early in the 1930s, on Polish initiative, the agricultural countries of eastern Europe began some planning of their assets and needs, but their efforts failed because no international machinery capable of guaranteeing stable prices for agricultural produce and of helping the agricultural states financially could be devised.

During World War II four Allied governments-in-exile in London made plans for closer political and economic association: on Nov. 11, 1940, the Polish and Czechoslovak governments issued a declaration of principle and on Jan. 23, 1942, signed an agreement settling the terms of a Polish-Czechoslovak confederation; on Jan. 15, 1942, the Greek and Yugoslav governments signed an agreement concerning the constitution of a Balkan union. The four governments hoped that after the war the absence of German imperialism would create an ideal climate for a European policy of political and economic integration which was to be extended to Hungary, Rumania and Bulgaria; but nothing came of these plans. In 1945 Germany was crushed; but the Soviet military frontier was moved from the Narva-Minsk-Odessa

line to the Wismar-Eisenach-Semmering-Sofia line, and the eastern European countries joined the largest planning area in the world.

In one way the new protector fulfilled the desires of the eastern European countries. German imperialism had tended to keep eastern Europe backward as a reserve source of cheap food, cheap raw materials and cheap manpower: the Soviet planners accepted the idea of industrialization, which was the only means of reducing the overpopulation of the countryside and increasing the national income. This basic difference of approach between Germany and the Soviet Union to the problem of eastern Europe was easy to explain. Germany itself was over-industrialized and its intention to enslave eastern Europe was publicized crudely and naively. The Soviet Union was under-industrialized, its need for steel, machinery and manufactured goods was enormous and its intentions were always presented to the world in general and to its potential satellites in particular as being identical with the interests of the liberated or to-be-liberated people.

Moscow-Planned Industrialization. The Soviet Union encouraged only its own type of industrialization in eastern Europe, namely that of heavy industry producing steel, tractors and fertilizers (or guns, tanks and explosives) rather than that of light industry producing consumer goods. The old and new steelworks and factories were using Soviet iron ore and Soviet cotton supplied to them at high prices, and in return the eastern European countries were sending to the Soviet Union coal, crude oil, cement, textiles and machinery at low prices. Many in these countries, not only Communists, considered that the industrialization and development plans were worth supporting because the steel furnaces, the power stations, the chemical and the machine-building plants represented in any case an increase of national wealth and equipment.

Though, as already stated, eastern European standards of living were low as compared with those of western Europe, they were higher than those of the Soviet people, which was an additional reason for the exclusion of light and secondary industries by the Moscow planners. Similarity in social structure was an indispensable condition of planning in the new *Grossraumwirtschaft* extending from Eisenach to Kamchatka. To raise the standard of living of the Soviet people to the level of, for instance, the Czech people was materially impossible and undesirable: the contrary operation was, therefore, necessary. This was especially painful to the Czechs, but there was no noticeable improvement in the standard of living in other people's democracies. Real improvement was registered in the industrial production of capital goods and also in the national income of which a high percentage was immediately re-invested (20% in Poland and in Czechoslovakia). The rise of industrial production in Poland, for instance, until 1949 was a result not of economic planning but of the considerable shift of frontiers to the west. Polish agricultural production in 1950 still lagged behind the 1934-38 average for the same territory, being only nine-tenths for wheat and three-quarters for rye and potatoes. According to the U.N. Food and Agriculture organization, the yearly consumption per head in Poland in 1948-49 was 149 kg. of cereals and 16 kg. of sugar, which was an increase, since the respective figures for 1934-38 were 134 kg. and 9 kg.; but the consumption of potatoes, meat and dairy produce was lower (240 kg., 19 kg. and 117 kg. as against 285 kg., 26 kg. and 128 kg. respectively). In Rumania the yearly consumption per head was 180 kg. of cereals, 14 kg. of meat and 96 kg. of dairy produce in 1947-48 as against 202 kg., 18 kg. and 103 kg. respectively in 1934-38. In Hungary the consumption of cereals slightly increased (175 kg. as against 164 kg.), but that of potatoes, meat and dairy produce sharply declined (58 kg., 23 kg. and 62 kg. in 1947-48 as against 112 kg., 36 kg. and 105 kg. respectively in 1934-38). *Per capita* consumption of textiles in Bulgaria, Hungary and Rumania was also lower (2·9 kg., 2·9 kg. and 2·0 kg. respectively in 1948 as against 4·5 kg., 3·8 kg. and 2·6 kg. respectively in 1938).

Unity of purpose being the principal condition of planning, it was obvious that Moscow could not launch all its programme immediately after the German defeat. The Communist parties were not in control in all the people's democracies and such control was, of course, essential. Moreover, the economic and social structure of the "liberated" countries was not yet ready for "socialist construction" on the Soviet model. Short-term plans were, therefore, encouraged everywhere: their aim was to achieve the recovery of prewar levels and they had the double advantage of mobilizing popular enthusiasm and of preparing the way for long-term plans.

Short-Term Plans and Nationalization. In 1947 the Czechoslovak and Bulgarian two-year plans began and also the Polish and Hungarian three-year plans. Rumania was the last satellite country to get a State Planning commission (July 1948) which drew up two one-year plans for 1948 and 1950. (The most important characteristics of these plans are summarized in Table I.) In the meantime, under Soviet guidance, other preparatory measures were taken in all the eastern European countries. Nationalization of industry was the first measure, but it was applied in stages, according to local political conditions or the necessities of Soviet tactics. In Czechoslovakia, for instance, decrees of Oct. 1945 nationalized only three-fifths of the industrial enterprises, these being those having more than 500 employees: the remainder were nationalized in April 1948, two months after the Communist *coup d'état*. In Poland all industrial enterprises employing more than 50 workers were nationalized in Jan. 1946 and this represented three-quarters of the country's industrial production; the remaining private factories and workshops were gradually taken over by the state which used tax and credit pressure, or confiscation under the pretext of economic sabotage. By Sept. 1949 it was estimated that 95% of all industrial production in Poland belonged to the "state sector." In Hungary and Rumania nationalization of industry took place only in 1948: in March a law was passed by the Budapest parliament nationalizing all industrial enterprises employing more than 100 persons; in Bucharest a similar law was passed in June. As Hungarian and Rumanian factories were fulfilling Soviet reparations orders, and as this caused a great shortage of consumer goods, it suited Soviet policy to accuse the "capitalist speculators" of being responsible for the shortages. In Bulgaria all industry was nationalized in Dec. 1947.

Everywhere the nationalization of industry was accompanied by denials, which were not borne out by events, that the nationalization of trade or of agriculture was contemplated. Private banking ended in Poland in 1946, in Bulgaria and Hungary in 1947, in Rumania in 1948 and in Czechoslovakia in April 1949. Foreign trade became a state monopoly in all eastern European countries through the creation of Ministries of Foreign Trade, the formation of specialized import-export agencies and the subordination of all foreign exchanges to a system of licences. At home, nationalization of wholesale trade was followed by that of retail trade. Here again Soviet experience was kept in mind. To avoid chaos in the distribution of commodities continuance of the retail trade was permitted for a few years. In Bulgaria, claiming to be in the van of people's democracies in the field of "socialist construction," 27% of all retail trade was in private hands at the end of 1948 and 11% at the end of 1949. In Czechoslovakia almost two-fifths of the retail trade still belonged to the "private sector" at the end of


EASTERN EUROPEAN ECONOMY
BALTIC SEA
DENMARK
Aalborg
Copenhagen
Malmö
Klaipeda (Memel)
LITHUANIAN S.S.R.
Sovetsk (Tilsit)
R.S.F.S.R.
Vitebsk
Kaliningrad (Königsberg)
Kaunas
Gdynia
Gdańsk (Danzig)
Chernyakhovsk (Insterburg)
Vilnius (Vilno)
Lübeck
Rostock
Hamburg
Elbe River
Bremen
Szczecin (Stettin)
Grodno
Minsk
BYELORUSSIAN S.S.R.
EAST
POLAND
Vistula River
WEST
GERMANY
Magdeburg
Berlin
Poznań
Weser River
Leipzig
Łódź
Warsaw
Brest-Litovsk
UNION OF SOVIET
SOCIALIST REPUBLICS
Lublin
Dresden
Wrocław
Oder River
Katowice
Kraków
Kiyev
CZECHOSLOVAKIA
Prague
Ostrava
Lvov
UKRAINIAN S.S.R.
Nuernberg
Danube River
Stuttgart
Brno
Košice
Munich
Linz
Vienna
Bratislava
Miskolc
MOLDAVIAN S.S.R.
Salzburg
Innsbruck
AUSTRIA
Budapest
Debrecen
Iași
Kishinev
Graz
HUNGARY
Oradea Mare
Cluj
Odessa
RUMANIA
Ljubljana
Sava River
Szeged
Pécs
Arad
Brasov
Galați
Brăila
Verona
Venice
Trieste
Rijeka
Timişoara
Ploești
Parma
Bologna
Belgrade
Bucharest
Constanta
Danube River
Giurgiu
Ruse
Sarajevo
Split
Niš
Varna
BLACK
SEA
ITALY
ADRIATIC
SEA
YUGOSLAVIA
BULGARIA
Sofia
Burgas
Stara Zagora
Titograd
Rome
Skopje
Plovdiv
Istanbul
Üsküdar
Durrës
Tirana
ALBANIA
SEA OF
MARMARA
Thessaloniki (Salonika)
Vlonë
GREECE
AEGEAN SEA
TURKEY
Izmir
Athens
MEDITERRANEAN SEA
Post-1947 boundaries
Pre-1938 boundaries
Boundaries of Soviet Republics
Boundaries of Soviet Zones in Germany and Austria
Cities of 1,000,000 and over
Other cities
Selected railways
Main navigable rivers
Main canals
Canals under construction
Pipe lines
Coal mining
Oil fields
Steelworks
Steelworks under construction
Salt
Aluminum
Chromium
Copper
Iron
Potassium
Magnesium
Lead
Uranium
Zinc
U.S.S.R. before 1939
Soviet annexations (1939 to 1945)
Soviet controlled countries
LAMBERT CONFORMAL CONIC PROJECTION
0 100 200
MILES
ENCYCLOPAEDIA BRITANNICA, Inc. 365-511

TABLE I. RECONSTRUCTION AND DEVELOPMENT PLANS IN EASTERN EUROPE

	Period of Plans	Capital Expenditure million $*	Percentage Distribution of Investments in Industry, Transport, Agriculture, Housing, Public Services and Other investments						Industrial Production Aims †
			Ind.	Tt.	Agr.	H.	P.S.	O.	
Poland	1947-49	1,950	39	24	13	9	11	4	152
	1950-55	11,500	42	15	12	12		19	288
Czechoslovakia	1947-48	1,340	36	22	7	20	15	—	110
	1949-53	5,800	41	16	8	12	22	1	173
Hungary	1947-49	570	32	27	9	12	20	—	127
	1950-54	2,200	49	17	17‡	7	10	—	228
Bulgaria	1947-48	221	45	15	6	11	17	6	134
	1949-53	850	40	19	13	5	19	4	293
Rumania	1949-50§	1,230	47	21	9	21		2	140
	1951-55	—	—	—	—	—	—	—	302

* U.S. dollars in 1948 prices. † 1938=100, for Poland within prewar frontiers; 1937=100 for Czechoslovakia and Bulgaria. ‡ Including drainage, irrigation and expenditure on livestock, fertilizers and seeds. § Two one-year plans.

1949, in Poland the proportion was one-half and in Hungary two-thirds. During 1950, however, the "state sector" engulfed the majority of remaining private retail shops.

Having disposed of the industrialists and bankers, the landlords and merchants, the shopkeepers and artisans, the Communist state could not permit the continued existence of the remaining and numerically most formidable representatives of "capitalism"—namely the peasant-proprietors. To gain their support, or at least their neutrality, the first step in all eastern European countries was the confiscation of medium estates left by the land reforms of the 1920s and their division among landless or poor peasants. These land reforms, enacted in 1944-45, were tactical measures to placate the poorer peasants for a time, and they increased the number of uneconomic dwarf farms. There was no hint of approaching collectivization of the countryside until mid-1948 when in all the satellite states propaganda was begun to the effect that the peasants' road to wealth lay in uniting smallholdings into large collective farms described as "producers' co-operatives." Responsible Communist leaders insisted that this unification must be on a "voluntary" basis and must proceed slowly. Again, this caution was inspired by tactical considerations, for the peasant-proprietor was sentenced by Leninist-Stalinist doctrine to extinction, and the elimination of the class depended on the training of a necessary *cadre* of collective-farm managers and on the sufficient production of tractors and agricultural machinery. (*See* also PEASANT MOVEMENT.)

Long-Term Plans and Economic Integration. When in July 1947 Moscow forbade its European satellites to join in the European Recovery programme launched by the U.S. secretary of state, George C. Marshall, it took also the major decision to speed up the economic integration of the people's democracies with the U.S.S.R. A network of bilateral trade agreements covered eastern Europe and during their negotiation, supervised by Vyacheslav M. Molotov and Anastasy I. Mikoyan, long-term plans for the satellite countries were discussed and co-ordinated. In Jan. 1949 the creation of the Council for Mutual Economic Aid (*q.v.*) was announced from Moscow, and Czechoslovak and Bulgarian five-year plans were started; in 1950 the Polish six-year plan and the Hungarian five-year plan came into force; on Jan. 1, 1951, the Rumanian and Eastern German five-year plans were put into operation. (*See* Table I.).

In all eastern European countries, except Czechoslovakia, there was a serious shortage of machinery and heavy equipment and rapid industrialization was impossible without outside help. The Soviet Union was unable to supply capital goods, engaged as it was in the rehabilitation of its own industry destroyed by the German invader. Only the industrialized countries of western Europe and the U.S. remained as possible sources of supply and the Polish 1947-49 plan foreshadowed a $600 million loan in the U.S. Forbidding its satellites to join the E.R.P., Moscow, compelled to seek at least partial replacement of U.S. aid, on Jan. 26, 1948, concluded with Poland an agreement for an exchange of goods to the total value of $1,000 million in five years and for a $450 million investment credit; on June 29, 1950, the Soviet Union accorded to Poland an additional credit of Rb. 400 million, which at a new (and artificial) exchange rate was equivalent to $100 million. But as the Soviet machinery and heavy equipment could not be delivered immediately the three-year Polish plan could not be achieved and the six-year plan had to be revised: the steel production target, for instance, had to be changed from 7 million to 4·6 million metric tons by 1955.

As the Soviet Union would be unable for a long period to help its eastern European satellites in capital goods, it decided to increase local production. The Polish-Czechoslovak industrial basin was to be integrated and developed. On Aug. 8, 1948, a Polish-Czechoslovak agreement was signed in Warsaw to this effect: to supervise its execution a Polish-Czechoslovak Economic Co-operation council and 17 specialized committees were formed. The idea was to create an "eastern Ruhr" in the Katowice-Moravska Ostrava area. Table II demonstrates that such an ambition was not an exaggerated one.

Comparison of the distribution of investments between the short-term and long-term plans showed that the proportion of capital expenditure going into industry was increased at the expense of transport, housing and agriculture. The long-term plans provided for the construction of some extremely large plants. In Poland were being built two new steelworks with an annual capacity of 1·5 million tons each near Cracow and Częstochowa, and a motor-vehicle factory at Żerań, near Warsaw. New steelworks at Moravska Ostrava and a chemical combine for brown coal distillation and the production of synthetic oil were being constructed in Czechoslovakia. In Bulgaria the biggest investments were in electric power plants and a nitrogen fertilizer plant at the new town of Dimitrovgrad (on the Maritsa river, near Rakovski station on the Plovdiv-Svilengrad railway): begun in Aug. 1948 the plant was to be in operation by Nov. 1951 and was expected to have a yearly output of 70,000 metric tons. In Hungary a steel plant was being built at Dunapentele on the Danube, based on coal from nearby Pécs and on iron ore from the Soviet Union. In Rumania—where, according to Mme. Ana Pauker, the output of crude oil was to be more than doubled by 1955—the construction of the Danube-Black sea canal from Cernavoda to Capul Midia, near Constanţa, was begun in the summer of 1948: this canal would shorten the Danube waterway by 150 mi. Eastern Germany, a newcomer in the satellite family, was not forgotten by the Moscow planners. One reason for the abandonment of the Berlin blockade in 1949 was the Eastern German steel shortage, and the Russians' decision to rebuild the five steelworks which they had previously dismantled as reparations, was therefore not surprising. The Eastern German government was also instructed to build a new steel plant on the Oder, between Fürstenberg and Schönsliess: work on the plant began on Aug. 21, 1950, and it was hoped

to produce 550,000 tons of steel by 1954, operating on Polish coke and Soviet iron ore. The latter would have to be carried by rail to Kozle on the Oder or by the Danube to Bratislava and thence by rail. At the end of the year the Oder-Danube canal project was still only a project.

Trade with the Soviet Union. By subordinating the industrialization of the satellites to the single aim of defending the Soviet fatherland, Moscow rendered eastern Europe independent of western Europe. The increased commerce between the Soviet Union and its satellites left small room for trade between east and west. Precise data was a state secret, but A. I. Mikoyan stated in *Pravda* (Dec. 21, 1949) that the volume of Soviet foreign trade was more than double that of prewar and that two-thirds of this trade was with the people's democracies. Before World War II there was no trade between Bulgaria, Rumania and Hungary and the U.S.S.R.: by 1950, however, four-fifths of Bulgarian trade, three-quarters of Rumanian trade, and half of Hungarian was with the Soviet Union. The Soviet participation in Poland's foreign trade amounted to 1% in 1936-38, but it was 22·9% in imports and 18·9% in exports by 1948. In 1949 Polish trade with the U.S.S.R. rose by more than one-third. In 1950 the Soviet Union had more than 50% of Poland's foreign trade. The Soviet part in Czechoslovakia's trade by 1947 the Soviet part was still only 6·2% in imports and amounted in 1936 to 2·2% in imports and 1·1% in exports; 5·1% in exports, but after the *coup d'état* of Feb. 1948 the great transformation began and by 1950 more than half of Czechoslovak foreign trade was with the Soviet Union.

The meaning of planning, as of democracy or socialism, differs on the two sides of the "iron curtain." Planning in the western democracies combines social justice with political freedom, nationalization with private property, and there is always an over-all control by a freely elected parliament. In a Communist-controlled state planning can only be total: under the dictatorship of the Communist party, it embraces the national economy entirely, controls all production, all consumption and all manpower.

Under any regime resources of capital can only be acquired by a reduction of consumption or an increase of production. The Soviet planning extended to eastern Europe uses both methods: by ruthless reduction of consumption it increases production. The national income rapidly increases without any corresponding improvement in the standard of living because all surpluses are re-invested in the further expansion of heavy industry, the basis of economic development. In this way the main object of Soviet planning is carried through, which is to create a large, completely self-sufficient economic area yielding, as an immediate necessity, the speediest possible increase of military potential.

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(K. SM.)

EASTERN ORTHODOX CHURCHES: *see* ORTHODOX EASTERN CHURCHES.

ECONOMIC CO-OPERATION ADMINISTRATION (E.C.A.): *see* EUROPEAN RECOVERY PROGRAMME.

ECUADOR. Republic on the west coast of South America, straddling the equator, bounded N. and E. by Colombia and E. and S. by Peru. Area: 104,510 sq.mi. (including the Galápagos Islands, 3,029 sq.mi.). Pop. (no census ever taken, 1949 est.): 3,404,000 of which *c.* 60% Indians, 30% *mestizos* (mixed blood), 9% whites, and 1% Negroes. Language: Spanish, but Indians speak Quechua and Jibaro. Religion: mainly Roman Catholic. Chief towns: Quito (cap., pop. 1947 census, 200,185); Guayaquil (the main port, 235,000); Cuenca (53,520). President of the republic, Galo Plaza Lasso.

History. The government continued impressive social advances during the year 1950, including the sale and authorized homestead reservation of public land to citizens, resettlement projects, irrigation developments, the extension of national credit to farmers, the provision and enforcement of compulsory primary education and the compulsory military training of male youth of 19 to 22 years of age.

During 1950 the government reported a national resources survey indicating that Ecuador holds a unique position as the nation best capable of supporting additional population and development. The report showed that known resources were capable of supporting at least three times the 1950 population. About 46,000 sq.mi. of land remained subject to homestead reservation, and about 10,000 sq.mi. were at public sale. Barely half of the renowned Quito valley, termed the garden land of the American tropics, was settled. Comparable areas totalling at least 29,000 sq.mi. included the Los Alpes and San Domingo de los Colorado lands, which despite medium altitudes and fertile soils remained virtually unsettled.

(C. M. WI.)

Education. Schools (1948-49): public primary 3,029, pupils 208,155; private (mostly Roman Catholic) 396, pupils 56,116; public secondary 59, pupils 12,513; private 68, pupils 5,502. There were four public universities — Quito (2,383 students), Guayaquil (1,472), Cuenca (541) and Loja (144) — and the Catholic university of Quito (60 students).

Agriculture. Principal export crops (1949-50, short tons): cacao 22,000; coffee 19,300; rice (1948-49) 119,000. In 1945 there were about 1,200,000 cattle, 1,443,000 sheep and 346,000 goats. Important forest exports in 1949 included tagua nuts (9,800 short tons) and balsa wood (2,250 short tons).

Mineral Production. Production in 1949 included: gold 80,982 fine oz.; silver 277,047 fine oz.; copper 1,552,550 lb. Production of petroleum, concentrated on the Santa Elena peninsula, was 2,535,233 bbl., of which 915,721 bbl. were exported.

TABLE II. PROGRESS OF EASTERN EUROPEAN INDUSTRIAL PRODUCTION

	Coal* (million m. tons)			Crude Oil† ('000 m. tons)			Electricity (million kwh.)			Crude Steel ('000 m. tons)		
	1937	1950	1955	1937	1950‡	1955‡	1937	1950‡	1955	1937	1950‡	1955
Poland§	64·7	78·0	100·0	501	180	350	7,050	8,800	19,300	1 987	2,500	4,600
Czechoslovakia	16·9	18·5	28·8	18	60	300	4,000	8,600	11,200	2,315	2,800	3,500
Eastern Germany	6·0	2·5	4·5‡	—	—	—	17,200	15,000	26,400	1,700	1,200	2,200‡
Hungary	0·9	1·2	2·0	2	660	1,000	1,061	2,360	4,200	648	900	1,500
Rumania	0·3	2·5	8·0	7,150	5,820	13,200	600	1,000	3,000	239	250	1,250
Bulgaria	0·12	0·2	0·4	—	—	—	202	900	1,800	—	—	10
Totals	88·92	102·9	143·7	7,671	6,720	14,850	30,113	26,660	65,900	6,889	7,650	13,060

* Figures for coal exclude lignite or brown coal extraction of which in 1950 was estimated at more than 100 million m. tons in Eastern Germany, 27·5 million in Czechoslovakia, 18 million in Poland, 9·5 million in Hungary, 5·8 million in Rumania and 4·5 million in Bulgaria.

† Excluding synthetic oil production. To the totals, however, should be added the production of natural crude oil of Albania (estimated at 350,000 tons in 1950) and that of the Soviet zone in Austria (900,000 tons in 1950).

‡ Estimated.

§ Production in the existing territory. In 1937, within the prewar frontiers, Poland produced 36·2 million m. tons of coal, 3,356 million kwh. of electricity and 1,467,000 tons of crude steel.

Foreign Trade. Foreign trade through the port of Guayaquil in 1949 included exports valued at 439 million and imports valued at 602 million sucres. Chief exports were cacao (26%), coffee (17%), rice (16%) and bananas (15%). Principal customers: U.S. (55%), the Philippines (8%) and Italy (8%). Leading suppliers: U.S. (70%); U.K. (7%).

Transport and Communications. Railways (1949): 698 mi. Highways (1947): 1,591 mi. of main roads and 1,121 mi. of branch roads. In 1948 there were 2,921 cars, 4,245 lorries and 945 buses. Telephones (1950): 18,882. Radio receiving sets (1949): 35,000.

Finance. (Million sucres) budget (1950 est.): balanced at 388. Internal debt (Dec. 31, 1949): 111·4. Notes in circulation (Sept. 30, 1950) 440; banking deposits 443. Monetary unit: *sucre* with an official exchange rate of 37·80 sucres to the £ and 13·50 to the U.S. $. (J. W. Mw.)

See J. E. M. Carvell, *Economic and Commercial Conditions in Ecuador* (London, H.M.S.O., 1950).

EDUCATION. In primary and secondary education in 1950 three features stood out: extensive building of new schools, launching of new types of secondary and vocational schools and intensive effort to recruit a sufficient number of teachers.

International. The fifth general conference of the United Nations Educational, Scientific and Cultural organization, held at Florence in June and July, faced the problem of whether the organization ought to confine itself to technical projects, requiring years of peace to produce results, or take immediate steps to combat dangers due to the threat of war. After prolonged and often heated debate, heightened to crisis at one moment by the resignation of the director general, Jaime Torres Bodet (who was later persuaded to withdraw his resignation), the conference established in addition to the 1951 programme a 10-point long-range basic programme and at the same time charged the executive council and the director general to submit special projects designed " more directly and in the framework of the United Nations and its particular departments, to support and consolidate peace." Such projects, it was agreed, could not be financed from U.N.E.S.C.O.'s ordinary budget; it was therefore decided that they might be financed " by voluntary contributions of money from private and public sources or in services from as many countries as possible." Under this heading U.N.E.S.C.O. was instructed to organize and conduct a major project designed to advance international understanding in Germany. The conference unanimously approved a convention to allow a wide range of educational, scientific and cultural materials to cross national frontiers free of duty. By Dec. 1, 19 nations had signed this. The ordinary budget for 1951 was fixed at $8,200,000.

In August the U.N.E.S.C.O. executive board, in response to a request from the United Nations secretary general, Trygve Lie, resolved that " within the framework of its competence U.N.E.S.C.O. would give all possible aid and assistance to the action undertaken by the United Nations in Korea." It instructed its director general to give emergency relief in the fields of education, science and culture to the civilian population in Korea and to develop U.N.E.S.C.O.'s programme for teaching about the United Nations, with particular emphasis upon the necessity for collective security based on respect for law. Four U.N.E.S.C.O.-sponsored international seminars were held: on geography teaching at Montreal; on textbooks at Brussels; on adult education near Salzburg, Austria; and on the role of libraries in adult education at Malmö, Sweden. Sweden and Guatemala joined the organization.

Between Aug. 1949 and Aug. 1950 the number of schools for Palestine refugee children provided by U.N.E.S.C.O. grew from 39 to 83, accommodating 38,000 pupils as against 21,000. In October John W. Taylor, president, Louisville university, was appointed deputy director general to take up duty on Jan. 1, 1951. He succeeded W. H. C. Laves.

The 13th international convention (the first since 1936) of the World Council of Christian Education (formerly the World Sunday School association) brought 5,000 delegates from 62 nations to Toronto in August to discuss the Christian education of children, youth and adults. The convention, first held in 1889, is representative of Protestant churches only. The first conference of the South Pacific commission, held at Fiji in April and May, and attended by representatives of 15 territories, resolved that " the objective of education should be considered as enabling the peoples of the South Pacific to maintain respect for their native heritage and crafts and at the same time to cope with the problems of the modern world." It was agreed that the maximum encouragement should be given to the exchange of village school teachers within the territories, that every effort be made to promote specialized training for teachers and that Australia and New Zealand be asked to allow teachers from other territories to make full use of their institutions for vocational and professional training.

In March the cultural committee of the Brussels Treaty organization approved the issue of a cultural identity card, which shortly afterwards became available to teachers, students, researchers, scientists and artists, entitling the holder to such privileges, when in any other of the treaty countries, as reduced transport rates, free or cheap entry to museums, reduced prices for concerts and plays, remission of fees at specified educational institutions and facilities for consulting libraries, visiting educational and scientific establishments, and obtaining additional currency.

Dr. Maria Montessori's 80th birthday was celebrated at Amsterdam in April by a 5-day conference attended by 300 members from 13 countries. Dr. Montessori, who lectured twice, received an unforgettable ovation.

Great Britain. *England and Wales.* In February the teachers' panel of the Burnham committee decided unanimously to give a year's notice from March 31 to terminate the existing agreement on teachers' salaries. In November the committee announced a new agreement whereby the basic rates for qualified male assistant teachers were increased by £75 at the minimum, £375 (old rate £300), and the maximum, £630 (£555); for unqualified male teachers by £45 at the minimum, £225 (£180), and £75 at the maximum, £375 (£300); and for temporary male teachers by £45 at the minimum, £225 (£180), and £57 at the maximum, £285 (£228). In all grades women, as previously, received 90% of men's salaries at the minimum, and 80% at the maximum. The addition to the basic rates for graduate qualification was increased from £30 to £60 for men and from £24 to £48 for women. The restriction upon the number of posts of responsibility for assistant teachers was removed, as was the limit upon the amount of the allowance a teacher might receive; a total sum was allotted to each school with more than 100 pupils, and in addition a " pool " was created in each area, at the rate of 4*s.* a registered pupil, to be used at the discretion of the local education authority to supplement any allowance for responsibility, whether of head or assistant teacher. The allowances for head teachers of schools up to 300 pupils and for qualified teachers of the blind and the deaf were slightly increased.

In January the first report of the Local Government Manpower committee, in making recommendations for delegating more responsibility to local authorities recognized six primary duties of the minister of education determining the points at which he must exercise control. He must be satisfied that educational facilities and ancillary services are provided in sufficient quantity and variety, that educational establishments and ancillary services are well-managed, equipped, staffed and maintained, and about the qualifications of teachers and medical officers to the extent necessary to safeguard the childrens' interests and theirs; he must control the provision of educational premises and school fees



Princess Margaret reviewing the cadets of St. Edmund's School, Canterbury, during her visit to the school, May 1950.

charged and allowances made to the extent necessary to safeguard the interests of local education and school authorities, parents and students; and he must ensure the proper freedom of parents, teachers and other third parties. The government accepted the committee's recommendations.

The Ministry of Education's report on 1949, published in June, included sample judgments by inspectors on educational methods and standards in the schools. Infant schools were warmly praised. In primary schools was noted " a slow and slight but widespread change " from formal to more personal methods. Secondary modern schools had " much to offer to the social and spiritual side of their pupils' development " but were less successful in meeting intellectual needs. Some grammar secondary schools were making excellent efforts to reconcile " purely academic training with the broader aims and ideals " of contemporary educational philosophy. Secondary schools had suffered more from war than primary schools; they showed a lowering of standards in formal subjects, " notably science and mathematics, and to some extent in English."

W. H. D. Rouse, who died in February, had, as headmaster of the Perse school, Cambridge, from 1902 to 1928, made it world-famous by his application of the direct method to the teaching of Latin and Greek and his encouragement of his staff to develop similar educational methods. In November P. B. Ballard died: as school inspector, lecturer and author he had done as much as any man of his generation to introduce a more humane and progressive spirit in schools.

Scotland. In August a new code of regulations for primary and secondary schools came into force. This reduced the maximum number of pupils in a primary class from 50 to 45 and provided that every child on leaving school should have a record showing his academic and social proficiency. In February the Educational Institute of Scotland authorized the teachers' panel to present to the national joint council the principle of three salary scales, viz., those for non-graduates, pass graduates, and honours graduates. In June the Institute rejected new salary scales recommended by the council. In November the secretary of state for Scotland issued a draft of proposed new salary scales.

Northern Ireland. A government committee's report on the senior certificate examination for secondary schools, published in February, proposed little important change except the setting of papers at two levels, ordinary and advanced. In February the minister of education announced his intention to set up a committee on teachers' salaries after the English pattern, instead of the existing advisory committee. The grammar schools strongly opposed the proposal, which the minister abandoned in November. Trouble developed in May over the minister's decision to grant from September free grammar school education to all children passing the qualifying examination. Many grammar schools, on learning that they were forbidden to use fee income to provide against their responsibility for capital expenditure, backed out of the government scheme, thus leaving too few places available for the children who had qualified. In November the minister offered terms conceding rather more freedom to the schools. In June the minister appointed a working party to consider how the building of intermediate schools could be expedited.

Australia. Improved salary scales for teachers came into operation in South Australia in February. For primary schools they ranged for assistant teachers from £314 to £732 (men), and £259 to £590 (women); and for heads from £742 to £1,051. For high schools the ranges were: assistants £380 to £762 (men), £301 to £640 (women); heads, £841 to £1,111. In September two-way broadcast lessons were begun for children in isolated settlements in the Northern Territory. Special attention was given to social studies.

Canada. The federal government, which is responsible for the education of Eskimos and Indians, decided to build day schools for them in place of the residential schools hitherto mainly used; and to provide in these a more technical education to enable pupils to qualify for the increasing opportunities for employment opening in the northland.

Ceylon. The government issued proposals for far-reaching reform of the educational system. The key proposal was that public education should be organized on a functional instead of, as previously, a linguistic basis and should be divided into three stages: primary, secondary and further education. From kindergarten to university the medium of instruction should be the mother tongue, with English as a second language from the primary stage onwards. Curricula should be less academic during the primary stage; in the secondary stage there should be academic and practical streams, but the academic would include handicrafts, and the practical some academic subjects. There would be no fees. Grant-aided schools were offered the choice of coming into the scheme or remaining outside and continuing to charge fees. To operate the scheme five new bodies were proposed: a central advisory council, a research council, a publications board, a permanent commission for maintenance and equipment grants, and a registry of independent schools.

Pakistan. In April the West Punjab government published a 5-yr. plan to provide 1,200 new primary schools a year, 800 for boys and 400 for girls.

South Africa. A judgment of the supreme court in Pretoria in September established the right of Transvaal parents to have their children educated at private schools in whatever language they wished. The 1949 Transvaal language ordinance, which laid down in principle that the medium of instruction for every pupil up to and including the 8th standard should be the pupil's home language, was declared by the court to be *ultra vires* in so far as it purported to apply to private schools.

British Colonial and Dependent Territories. *Jamaica.* In 1945 Jamaica embarked upon a 10-yr. plan to remedy deficiencies in all parts of the education service. Commenting on the slight progress made by the end of the first five years H. Houghton, director of education, said in June that Jamaica had not been able to afford the necessary expenditure even though the capital cost was met from Colonial Development grants. No new secondary or technical schools had been built, and while 13,000 additional places had been provided for elementary education the elementary school population had increased by 12,500. There were 50,000 children still without schools.

Malaya. A draft development plan for a 6-yr. (1950-55) programme in education published in June included as a long-term objective provision for every child of school age, as short-term objectives the "evening up" of educational opportunity by providing more primary, secondary and technical schools, improvement of teacher-training facilities and increased grants to the university. In June James Griffiths, secretary of state for the colonies, opened the first of 18 new primary schools being built in Singapore, where primary education was to be made free and compulsory by 1957. In 1950 about two-thirds of children between 6 and 12 were at school.

Sudan. In January the first government secondary school with a Sudanese headmaster was opened at El Obeid.

British West Africa. A report by Dr. G. B. Jeffery, director of the London University Institute of Education, who visited the territories to investigate the need for a West African schools examination council, recommended in July that the examination syllabus of English examining bodies be adapted to African requirements and that the West African university colleges take students from "approved" secondary schools at the level of a good school certificate and give them during their first year "a broad and philosophic view" of their specialized subjects.

Europe. *Albania.* In April Enver Hoxha told the second national congress of the Albanian Workers' party that whereas in 1945-46 there were 1,129 elementary, secondary and grammar schools, with 24,980 pupils, in 1948-49 there were 2,075 with 181,140 pupils.

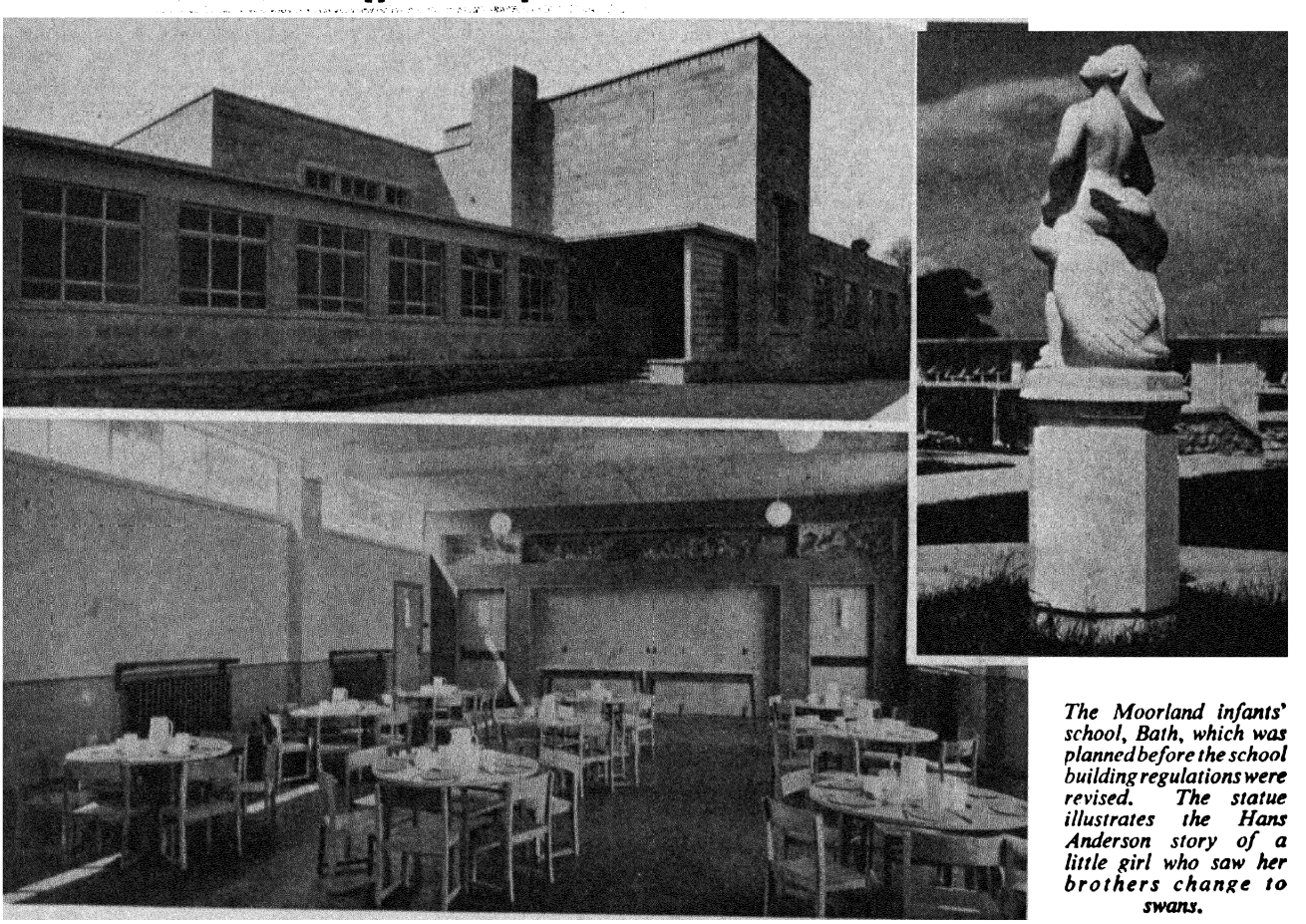
Bulgaria. At the national conference of the Communist party in June the minister of education, Kiril Dramaliev, was severely criticized for bureaucratic administration, failure to purge his ministry and lack of co-operation with teachers. In August, in accordance with a ministerial decree on education, commissions were appointed to supervise the formation of new schools, to be of three types: elementary (7-11), primary (7-14) and secondary (8-19).

Czechoslovakia. In May the Communist party congress was told that whereas in 1945-46 there were 267 secondary schools with 72,134 pupils and 2,048 teachers, in 1950 there were 832 with 161,522 pupils and 5,194 teachers. In August the deputy minister of education said that in the 1950 budget education was allocated 11 times as much as before 1938.

Denmark. Greenland was given its own board of education in April. When appropriate, elementary and preparatory schools were to be arranged in two sections: in the first all subjects except Danish were to be taught in the Greenland language; in the second, more subjects were to be gradually taught in Danish. Hartvig Frisch, minister of education from 1947 and an eminent historical scholar, died in February.

France. In January the minister of education, Yvon Delbos, published a proposed bill to reform public education. Under this schooling would be compulsory for almost all children between the ages of 6 and 18, in three stages: primary (6-11); selective and preparatory for secondary education (11-13); and then either continuation classes (13-16) or secondary education (13-18). There would be three types of secondary education: practical, vocational and classical-scientific. After secondary education there would be a second period of selection and preparation (18-20), satisfactory completion of which would confer the right to compete for admission to the university.

Germany. In April the Schleswig-Holstein diet permitted private schools to be established for the Danish minority in South Schleswig; these could teach Danish language and culture but must also teach German language, history, civics and geography. Seventy-one Danish schools were opened in the year to June 1950, as many as in the years from 1920 to 1945.



The Moorland infants' school, Bath, which was planned before the school building regulations were revised. The statue illustrates the Hans Anderson story of a little girl who saw her brothers change to swans.

Hungary. The Workers' party central executive in April criticized the Ministry of Education, saying public education was much below the general standard of development in the republic. In September it was reported that great efforts had been made to eliminate shortcomings; a higher percentage of pupils passed examinations and great numbers were applying for higher education. In July a government decree granted free social services to pupils in general and secondary schools living in colleges and state hostels, high school and university students. In November increased bonuses for outstanding teachers were announced, especially for introducing innovations in teaching technique. The Roman Catholic Church agreed to recognize the authority of the republic and its constitution and in return the government promised to give back to the church eight parochial schools to be staffed by members of religious orders. In September the minister of religion and public education decreed that teachers of religion could be appointed only by city or county councils upon the recommendations of church authorities. They were to teach with textbooks approved by the minister, and children could not be punished for absence from religious classes.

Ireland. In April the minister of education, General R. Mulcahy, set up a council of education consisting of 31 members to advise him on questions of educational theory and practice. The council was immediately asked to consider the function and the curriculum of the primary school. In August it was stated that new schools were being built at the rate of one a week.

Italy. The minister of education stated in May that during the past six years educational expenditure had risen from L. 26 million to L. 163 million; 2,400 schools and 49,000 schoolrooms had been built. Under the proposed reform eight years' schooling would be compulsory for all. So would religious instruction, but subject to the right of withdrawal. In October many thousands of teachers abstained from taking part in the state examinations as a move in their agitation for increased allowances and the establishment of a legal status for unestablished teachers.

Netherlands. An important conference took place at Emmerich in October between 140 Dutch and 300 German teachers to plan co-operation in fostering understanding between the two nations.

Norway. In February 500 Finmark teachers resigned; because of the dropping in 1949 of supplementary allowances they could get equal salaries elsewhere. In March the Storting agreed to the payment of municipal supplementaries.

Poland. The education budget for 1950 was stated to be 23·6% of the total budget. Priority was given to nursery schools and the number of scholarships for pupils in the basic primary school was trebled. In May it was reported that 343,000 children were in nursery schools, 1,500 of which were opened in 1949-50. In August 1,045 schools of all kinds were under construction. During 1950, 106 11-yr. schools were opened and the number of 7-yr. schools increased by 1,000. In November the minister of education announced that in view of the increased budget expenditure on education no payments could be made by parents to schools, except occasional gifts for specified purposes.

With the opening of the 1950-51 school year renewed efforts were made to secure the teaching of Marxism-Leninism throughout every school. Many schools were being opened in which religious instruction was banned; in Warsaw there were 20 by October, and there were stated to be 1,000 throughout the country.

Rumania. In October it was stated that 1,790,000 children were receiving elementary education, 224,000 medium education and 48,500 higher education.

Spain. A department of statistical studies was added to the national educational council to give technical assistance in school reform. In June it was stated that since the " War of Liberation " primary schools had increased from 43,000 to 62,166, secondary schools from 96 to 119. Over 100 vocational schools had been set up.

Sweden. In April the government grant for building new elementary schools was increased by Kr. 12 million to Kr. 34 million. In May the Riksdag unanimously approved in principle the projected 9-yr. standard school to replace the folk school, the higher folk school, the communal school and some state secondary schools. The aim of this reform, hailed as the most important since compulsory primary schooling was introduced in 1842, was stated to be better balance between academic and practical training.

Switzerland. In February the government of Zürich canton debated an education bill to make compulsory schooling nine years instead of eight, six at primary school followed by three at an academic or practical secondary school.

Turkey. The Democratic government which assumed power in May at once began investigations with a view to reforms in education. In July Tevfik Ileri, on becoming minister of education, announced his intention of dismissing from the ministry anyone suspected of Communist sympathies. This purge began in September. In November the minister announced the council of ministers' decision that religious instruction was, from the beginning of the 1950-51 school year, to be given during the last two years of primary education. Only teachers desirous of doing so were to give it, and parents wishing their children not to attend were to inform the school authorities at the beginning of the term.

In November the English high school for girls, Istanbul—unique in Turkey—celebrated its centenary, a year late. Begun in 1849 by Jane and Georgina Walsh under the patronage of the British ambassador, Viscount Stratford de Redcliffe, it had at the time of the celebration 161 pupils in the upper school (143 of Turkish nationality) and 82 in the lower (all non-Turkish). Altogether, 20 nationalities were represented in the school.

Yugoslavia. The 1950 budget of the Ministry of Science and Culture was 13,500 million dinars, as against 3,653 million in 1947. In August it was announced that compulsory eight-year schooling would be introduced throughout Yugoslavia in the autumn, and in October that there were then 1,400 schools (with over 200,000 pupils) for minority populations, as against 237 before the war. (H. C. D.)

United States. The U.S. Office of Education released in Sept. 1950 the following figures on enrolment in the public and private schools: elementary 23,686,000; secondary 6,142,000; all forms of colleges 2,700,000; and private commereial and nurse training institutions 375,000. The total for 1950-51 was placed at 32,903,000, with an increase of 920,000 elementary pupils and decreases of 98,000 secondary and 50,000 collegiate students as compared with the previous year. In all, this survey indicated, there was a shortage of 90,000 teachers. According to the U.S. Office of Education, in its report in November, attendance in 1,838 institutions for higher education dropped from 2,456,000 to 2,295,000 or 6·6%, and the number of veteran students was reduced from 856,000 in 1949 to 575,000.

Congress passed laws in 1950 for the provision of money to construct, maintain and operate school buildings in areas where the increase in defence activities required additional educational facilities (the Bailey law); for the establishment of a national science foundation " to develop and encourage the pursuit of a national policy for the promotion of basic research and education in the sciences " by the award of " scholarships and graduate fellowships in the mathematical, physical, medical, biological, engineering, and other sciences " (public law 507); for the tightening of some of the regulations

involving the education of veterans (public law 610); for the authorization of loans to higher educational institutions for the purpose of constructing housing facilities for students and teaching staffs (public law 475); and the extension of the coverage of the Social Security act to the teaching staffs and others in colleges and universities.

Higher Education. The problem of properly financing colleges and universities was carried over from 1949, but it was aggravated by the reduction in enrolment arising out of the graduation of veterans, smaller freshman classes resulting from the draft for the armed forces, and increases in operating costs. As 1950 came to a close, the fiscal plight of higher educational institutions was growing even worse.

According to a report by Ray C. Maul for the National Commission on Teacher Education and Professional Standards of the National Education association, only 22,460 teachers would graduate from colleges and teacher-training institutions during 1950, whereas the need was for as many as 100,000. Although the number of new teachers in 1950 represented an increase of 15·92% over that for the previous year, the constantly rising elementary school population more than wiped out this gain. The situation in the high schools, however, was different: there was a total of 84,730 new instructors available for only 30,000 vacancies.

Race and Religion. The most significant occurrence in United States higher education for 1950 took place on June 5, when the Supreme Court delivered two unanimous decisions respecting discriminatory practices agains. Negro students in southern colleges. In the case of *McLaurin* v. *University of Oklahoma*, the court disapproved the segregation of the Negro graduate student during instruction and other occasions because he was thereby deprived from the equal protection of the law under the 14th amendment. In the second case, the court ordered the University of Texas, Austin, to admit Heman Marion Sweatt, a Negro, to its law school, on the grounds that the state law school for Negroes was not equal in any way to the state law school for white students. Neither decision had any bearing on the larger issue of segregation in the public schools or the "separate but equal" doctrine in general throughout the south, since the court emphasized the application of the law to these specific instances. Nevertheless, there was widespread feeling that these decisions were instrumental not only in correcting the situation at the University of Oklahoma and the University of Texas, but also in increasing the enrolment of Negroes in institutions from which they had been formerly excluded. It was clear that the pattern of southern education in the colleges, if not elsewhere, was undergoing an important transformation.

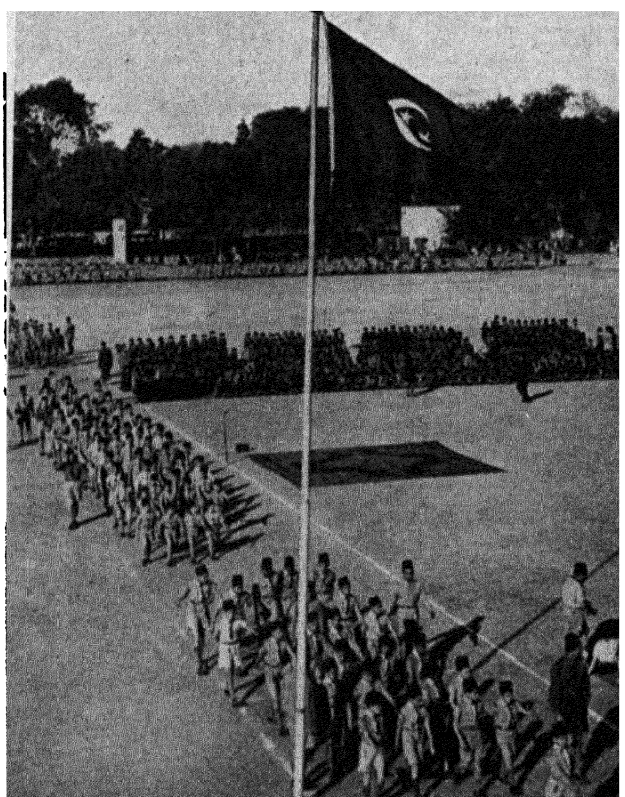
Communism. The imposition of a special non-Communist oath upon the teaching staff of the University of California by the board of regents caused a controversy which reverberated all over the nation. After considerable debate among the regents and the professors, and between both groups, regarding the question of the abridgement of academic freedom, a compromise was agreed upon. In the meantime, 26 faculty members resigned or were dismissed for refusing to sign the oath. On Dec. 16 the regents adopted the requirement of a state loyalty oath, in addition to the university's loyalty statement, of all employees of the university. This state oath made no specific mention of Communism.

International Educational Relations. More students of United States colleges and universities travelled to Europe during the summer of 1950 than during any preceding year. Estimates of the total varied from 10,000 to 20,000, whereas the number for 1949 was 8,000. In March the Institute of International Education released a publication, *Education for One World*, which contained its annual census of the number of foreign students enrolled in U.S. institutions of higher learning. According to this report, there were 26,433 such students during the academic year of 1949-50 in approximately 1,210 colleges. This total, a decline of 300 from that of 1949, included students from 125 separate geographical units all over the world, with most of them coming from Canada, China, Cuba, India and Mexico, in that order. (*See* also ADULT EDUCATION; CAMBRIDGE UNIVERSITY; LIBRARIES; LONDON UNIVERSITY; OXFORD UNIVERSITY; TEACHERS, TRAINING OF; UNIVERSITIES AND COLLEGES.) (W. W. BN.)

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EGYPT. Independent kingdom of northeast Africa, bounded N. by the Mediterranean, S. by the Anglo-Egyptian Sudan, E. by Israel and the Red sea, W. by Cyrenaica and the Sahara. Area: 386,110 sq.mi. Pop.: (1947 census) 19,087,849; (mid-1949 est.) 20,045,000. Language: mainly Arabic (97%), with minorities speaking Greek, Italian, Armenian, French, Turkish, etc. Religion: Moslem (mainly Sunnites) 91·4%; Christian (mainly Copts) 8·19%; Jewish 0·4%; among the non-Coptic Christians there were (1937 census) Roman Catholic (all rites) 126,500, Greek Orthodox 105,000, Protestant 78,200, Gregorian Armenian 17,200, etc. Chief towns (pop., 1947 census): Cairo (cap. 2,100,506); Alexandria (925,081); Port Said (178,432); Tanta (139,965); Mahalla el Kubra (115,509); Suez (108,250); Mansura (102,709). Ruler, King Farouk I (*q.v.*); prime ministers in 1950, Hussein Sirry Pasha and (from Jan. 12) Mustafa el Nahas Pasha (*q.v.*).

History. The year 1950 began with a general election and a dramatic change of government. The Chamber of Deputies (Majlis el Nuab) had been dissolved on Nov. 7, and the



Boy scouts parading in Cairo in honour of King Farouk's 30th birthday.



King Farouk, seen after presiding over the ratification ceremony of the marriage of his sister, Princess Faika. Left to right, Ismail Sherine Bey and his wife Princess Fawzia (formerly wife of the Shah of Persia), King Farouk, Princess Faika and her husband Fouad Sadek Bey, and Princess Faiza and her husband Mohammed Ali Raouf.

business of the state, together with the task of preparing for the elections, was entrusted to the caretaker government of Hussein Sirry Pasha. The number of seats in the new chamber was increased, and elections were held on Jan. 3 for 315 seats as against the previous 260. These were the first elections to be contested by all parties for 10 years, those of 1942 having been boycotted by all parties except the Wafd and those of 1945 by the Wafd. Although the campaign had been a bitter one, the elections were unusually free from violence. The results showed a big swing towards the Wafd, whose extent was surprising to most observers. In some constituencies a second ballot was held on Jan. 10 after which the final state of the parties was revealed as follows: Wafd 225, Saadists 28, Liberals 26, Independents 33, Nationalists 6 and Socialists 1. The Kotla, the dissident Wafdist party of Makram Pasha Ebeid, was left without representation in the chamber.

The caretaker cabinet resigned on Jan. 12, and the retiring prime minister took over a new post as chief of the royal cabinet. Mustafa el Nahas Pasha, as leader of the Wafd, became prime minister, and his cabinet was sworn in on the same day. One of the first acts of the new government was to abolish the press censorship, which had been in force since the outbreak of war in Palestine. Martial law was ended on Feb. 5. King Farouk, accompanied by the prime minister, drove through the streets of Cairo to open the Egyptian parliament on Jan. 16. In his speech from the throne the king reiterated the Egyptian claims to the "unity of the valley of the Nile" and affirmed the country's loyalty to the aims of the United Nations and to those of the Arab peoples. The armed forces, he said, would be reorganized, and attention would be concentrated upon social conditions and employment. Some measures of social insurance would be introduced, and education, primary, secondary and technical, would be free from that day.

On Feb. 16 it was announced that General Haidar Pasha, who had been minister of defence from Nov. 1947 until this year, was appointed to be commander in chief of the armed forces, a new post. A more partisan note was struck later in the year. On June 17 and 18 royal decrees ordered drastic changes in the composition of the Senate (Majlis el Shuyukh). Hussein Heikel Pasha, its president and a Liberal, was replaced by a Wafdist minister, Zaki Ali el Orabi Pasha; 29 senators were dismissed and replaced by government supporters, while it was announced that the Senate would be enlarged from 149 to 179 members. It was officially stated that the dismissed senators owed their deprivation to the illegality of their decree of appointment, but the opposition charged the government with attempting to pack the Senate with its supporters, claiming that it feared enquiry into certain alleged scandals connected with army supplies and with operations on the Alexandria Cotton exchange. A manifesto signed by the dismissed president and by the leaders of the Saadist, Nationalist and Independent Wafdist groups accused the government of attempting to silence all opposition, to prevent freedom of speech and to set up a virtual dictatorship.

During the summer the king was abroad on an extended tour in Europe and, after his return on Oct. 17, he was presented with a petition signed by four opposition leaders, together with others, which alleged corruption by certain prominent officials and unconstitutional action by the government and hinted broadly at the possibility of a popular revolt. Referring to an enquiry which was in progress into alleged corruption in connection with the supply of arms to the Egyptian army, the petition spoke of the "widespread belief" that justice would not be able to reach the guilty. On Oct. 20, the prime minister informed the press that the king had ordered that the enquiry should be pressed regardless of personalities; and he claimed in a statement issued the following day that this declaration had silenced the opposition, whose petition was "unworthy of a reply."

In foreign affairs the past continued to throw long shadows. Differences among member states of the Arab league were blamed for the defeat in Palestine in the king's speech to the new parliament; and later, Egypt, a member of the Security council, refused to support the United Nations action in Korea, although declaredly sympathetic to its objects. This was stated to be in protest against what was described as the failure of the United Nations to take equally effective action against " aggression " in Palestine. So far as Anglo-Egyptian relations were concerned, the year began with good omens. The British foreign secretary visited Cairo on his way back from the Colombo conference in January and was the guest at a state banquet. King Farouk paid a visit to units of the Royal Navy at Alexandria and was himself visited by the Duke of Edinburgh. Another distinguished visitor to Cairo was the Duke of Gloucester, who informed King Farouk of his nomination as an honorary general of the British army. But, as the internal situation deteriorated, the chances of an agreed settlement of Anglo-Egyptian differences appeared to grow more remote, a project for a joint Anglo-Egyptian command in the event of war was rejected, and, in the autumn, Egyptian leaders were demanding the immediate evacuation of the British troops from the canal zone and the unconditional unity of Egypt and the Sudan, in terms which emphasized the continued significance of long-standing differences between the two powers. By the end of the year the atmosphere was quieter. The Egyptian foreign minister paid a visit to London, and Egypt was active, with other middle eastern and Asian powers, in attempts to bring about a peaceful settlement of the Korean war. (H. S. D.)

Education. Government schools (1948-49): kindergarten 57; primary 327, pupils 100,000; elementary 5,000, pupils 1,000,000; technical 70, pupils 17,136; commercial 17, pupils 5,481; agricultural 13, pupils 2,725; domestic science 15, pupils 1,763. Non-government schools: primary 452; secondary 76. Teachers training colleges 53, pupils 8,382. Universities 3, students 20,259. Other institutions of higher education 8.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): cotton, ginned 400 (369); maize 1,409 (1,250); wheat 1,080 (1,167); barley 166 (138); onions 195 (281); sugar, raw value 216 (210); broad beans 287 (321). Livestock ('000 head, March 1947): cattle 1,321; sheep 1,875; goats 1,474; asses 1,125; horses 28; mules 12; camels 197; buffaloes 1,240; pigs 50; chickens 16,312. Fisheries (1946): total catch 33,935 metric tons.

Industry. Crude oil production ('000 metric tons, 1949; 1950, six months, in brackets) 2,280 (1,174). Raw materials ('000 metric tons, 1948; 1949 in brackets): phosphate rock 377 (350); manganese ore 59 (138); salt 126 (350). Manufactured goods: cotton yarn ('000 metric tons, 1948; 1949 in brackets) 33·12 (33·72); cotton piece-goods (million sq. metres, 1948; 1949 in brackets) 156 (151); cement ('000 metric tons, 1948) 768.

Foreign Trade. (£E million, 1949; 1950, six months, in brackets) import 161·6 (92·3); export 137·8 (82·5). Main sources of imports (1949): U.K. 21·5%; Italy 8·5%; U.S. 8·2%; France 5·8%. Main destinations of exports: India 20·0%; U.K. 18·4%; Italy 7·4%; France 7·3%. Main imports: wheat 9·5%; fertilisers 5·9%; iron and steel products 5·8%; petroleum products 5·8%. Main exports: cotton 75·8%; rice 10·3%.

Transport and Communications. Roads (1947): 8,874 mi. Licensed motor vehicles (Dec. 1949): cars 48,000; commercial 13,600. Egyptian State railways (1949): 5,318 mi. Shipping (July, 1949): number of merchant vessels of 100 gross tons and over, 57; total tonnage 105,462. Telephones (1947): subscribers 99,814. Radio receiving sets (1949): 183,000.

Finance and Banking. (£E million) budget: (1949-50 actual) revenue 157·8, expenditure 187·4; (1950-51 est.) revenue 180·9, expenditure 206·0. National debt (April 1947; April 1948 in brackets): 118·8 (125·0). Currency circulation (Aug. 1949; Aug. 1950 in brackets): 145 (150). Gold and foreign exchange (million U.S. dollars, June 1949; June 1950 in brackets): 1,080 (673). Bank deposits (Dec. 1948; Dec. 1949 in brackets) 194 (180). Monetary unit: Egyptian *pound* with an exchange rate of £E 0·975 to the pound and £E 0·349 to the U.S. dollar.

EIRE: *see* IRELAND, REPUBLIC OF.

EISENHOWER, DWIGHT DAVID, U.S. army officer (b. Dennison, Texas, Oct. 14, 1890), graduated from the U.S. military academy at West Point in 1915. During World War I he served as an instructor, camp commander and commander of tank troops. He graduated later from the Army War college and the Army Industrial college, served in the office of the chief of staff at Washington, and in 1935 saw duty in the Philippines as chief of staff to General Douglas MacArthur. During World War II, he was supreme commander of the Allied armies that conquered north Africa and Sicily (1943), invaded Italy (1943), landed in France (1944) and completed the conquest of Germany from the west in 1945. He was made commander of U.S. occupation forces in Germany in 1945 and chief of staff, Nov. 20, 1945, retiring from that post on Feb. 7, 1948, to become president of Columbia university. During the 1948 presidential campaigns repeated overtures were made to Eisenhower to become a candidate of either party, but he declined to stand for nomination. On March 23, 1950, he said that the U.S. had disarmed itself too rapidly, and later that month told a Senate appropriations sub-committee that rearmament should concentrate on strengthening Alaska, modernizing all services and emphasizing intelligence work and industrial mobilization. He backed Senator William Benton (*q.v.*) in the latter's proposal for a " Marshall plan of Ideas " to combat Communism, and himself launched the " Crusade for Freedom " movement to enlist private propaganda agencies against Communism. On Dec. 19 the North Atlantic Treaty nation's council and President Harry S. Truman simultaneously announced Eisenhower's appointment as supreme commander of a 12-nation force, to be mobilized in the defence of Europe, and Eisenhower promptly flew to Europe to confer with ministers and heads of the armed services there on rearmament.

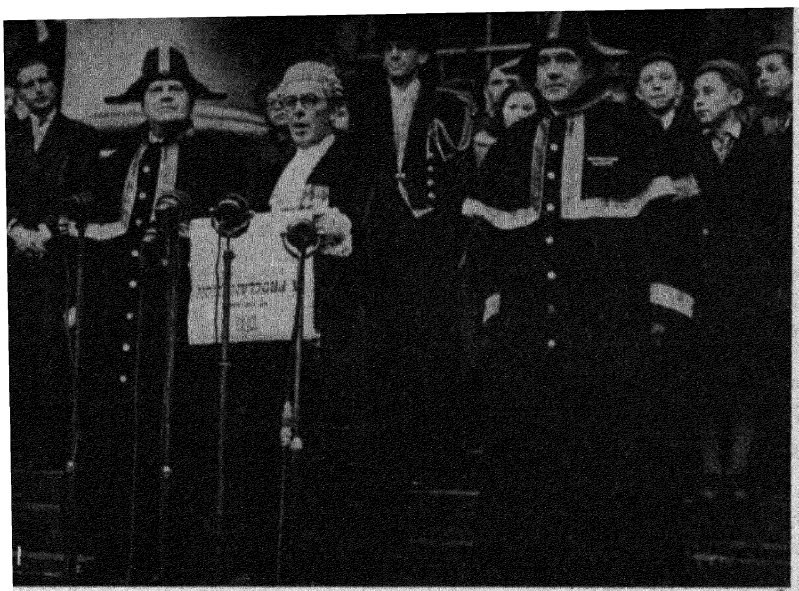
ELECTIONS. By 1950 only 16 out of 25 European states had freely elected parliaments and could be described as democracies. Outside Europe the proportion was even smaller: of some 50 independent states no more than a third—headed by the Commonwealth of Nations and the United States—merited that description.

Some middle-eastern states could be described as oligarchies but seemed to be on the way towards a real representative system. In the new independent states of Asia democracy was on trial: their leaders, in their immense task of reconstruction and consolidation, had to resist Communist attempts to seize power by infiltration or force. In Latin America, where the personal appeal was still strong, law was often used as a disguise or as an instrument. Some of the Latin American republics had promulgated more than 20 constitutions and undergone more than 50 revolutions in 125 years. But some of them had had for decades a record of unbroken acquiescence in the verdict of the ballot box.

Great Britain. The general election of Feb. 23 produced a parliamentary situation of rare occurrence, the working majority of the government being reduced from 146 to 5. In the predominantly industrial constituencies the Labour party maintained its hold; the residential constituencies moved towards the Conservative party and the rural areas did not weaken in their Conservative allegiance. Although maintaining its percentage of the total votes cast, the Liberal party fared badly: of its 378 candidates only 9 were elected and 314 lost their deposit. None of the Communist candidates was elected and 93 forfeited their deposits.

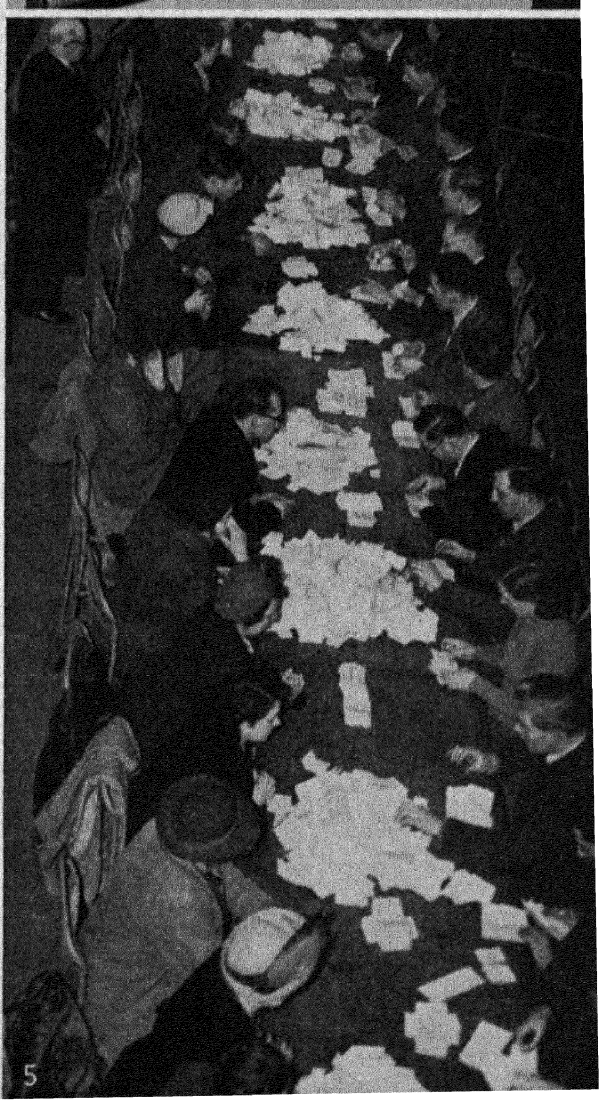
Out of the electorate of 34,269,764 over 84% recorded their votes, the largest electorate and the highest percentage in the history of the country.

The election results compared with those of July 5, 1945, were as follows:











THE BRITISH GENERAL ELECTION, 1950

On Feb. 23, 1950, the people of Great Britain voted in a general election for a new House of Commons.

The common crier (1) announcing the dissolution of the old parliament. Posters of the Labour Party (2) and the Conservative party (3) were seen throughout the country. Clement Attlee (4) canvassing in his constituency, West Walthamstow with Mrs. Attlee. The votes being counted in St. Pancras, London (5).

Parties	1950 Votes	%	Seats	1945 Votes	%	Seats
Labour	13,295,736	46·4	315	11,992,292	47·7	393
Conservative*	12,501,983	43·5	298	9,960,809	39·7	213
Liberal	2,621,489	9·1	9	2,245,319	9·0	12
Communist	91,815	0·3	0	102,780	0·4	2
Independents and others	258,454	0·7	3	677,749	3·2	20
Totals	28,769,477		625	24,978,949		640

* Including National Liberals and Conservatives.

Europe. Among 16 European democracies Great Britain was the only country to have a lower house elected by a simple majority system; 13 countries adopted proportional representation with a party list; the republic of Ireland retained the so-called single transferable vote system and Western Germany combined the majority system with proportional representation. During 1950 general elections were held in Albania, Belgium, Denmark, Eastern Germany, Greece, Turkey and Yugoslavia.

Albania. The election held on May 28 was in effect a plebiscite for the Communist-controlled Democratic front. It was officially announced that out of the electorate of 641,241 the total votes cast numbered 637,573 (99·43%) and that 626,005 (98·18%) votes were for the Democratic front. The new National Assembly consisted of 121 members, each representing a single constituency. Every member was supposed to represent 10,000 inhabitants.

Belgium. The third general election since World War II—fought on the issue of King Leopold's return to the throne—was held on June 4. The votes cast for the Chamber of Representatives, compared with those of June 26, 1949, were as follows:

Parties	1950 Votes	%	Seats	1949 Votes	%	Seats
Social Christian	2,354,965	47·69	108	2,190,898	43·55	105
Liberal	557,019	11·28	20	767,180	15·25	29
Belgian Labour	1,704,360	34·51	77	1,529,720	29·75	66
Communist	234,325	4·75	7	376,765	7·49	12

In the Senate 106 senators were returned by the same electorate as the Chamber of Representatives, 46 were chosen by the councils of the nine provinces and 23 were co-opted by senators already elected, The new Senate was composed as follows (1949 seats in brackets): Social Christian party 91 (92), Liberals 19 (24), Socialists 62 (53) and Communists 3 (6).

The Social Christians, whose policy was to restore the king, while securing a clear majority in both houses did not fully realize their hopes of an overwhelming victory. The Liberals' loss of nine seats, leaving them with 20 representatives in a chamber of 212, might to a great extent be attributed to their efforts at appeasement in the "royal question." The real victors were the strongly anti-Leopold Socialists, whose strength in the Chamber of Representatives rose from 66 to 77 and in the Senate from 53 to 62. The Communists, who in 1946 held 23 seats in the Chamber, after dropping to 12 in 1949 had declined to 7 in 1950.

Denmark. On Sept. 5, 13 months earlier than necessary, the Danish people voted in a general election. The results, compared with those of Oct. 28, 1947, were as follows :

Parties	1950 Votes	%	Seats	1947 Votes	%	Seats
Conservative	365,298	17·8	27	259,324	12·5	17
Retsforbundet*	168,418	8·2	12	94,570	4·6	6
Venstre (Agrarian)	437,952	21·4	32	574,895	22·9	49
Radical†	167,719	8·2	12	144,206	7·0	10
Social Democratic	813,590	39·7	59	834,089	40·3	57
Communist	94,495	4·6	7	141,094	6·8	9

* Right-wing Liberals or Single Tax party. † Left-wing Liberals.

Votes cast numbered 2,053,879 against 2,071,024 in 1947. The total number of seats of the Folketing or Lower House was increased from 148 to 149. The German party in southern Jutland polled 6,407 votes against 7,464 in 1947, but in both elections obtained no seat. Although the two right-wing parties considerably improved their positions and the Communists lost one-third of their votes, no single party secured a working majority and only a minority government seemed possible.

Eastern Germany. The election of the Volkskammer took place on Oct. 15. Its composition was settled two months before by agreement between the National front parties: the Socialist (Communist) Unity party secured 100 seats, the so-called National Democratic party, Farmers' party and other satellites 180 between them, and the Christian Democrats and Liberal Democrats 60 each. Eastern Berlin, which did not vote, was to be represented by 66 delegates with an advisory role. There was one single list of candidates and, according to the figures published on Oct. 16, out of the electorate of 12,331,905 the total votes cast numbered 12,139,932 (98·44%) and 12,088,745 (98·29%) votes were for the National front; there were only 35,544 votes against and 15,643 spoiled papers. On May 15 and 16, 1949, when the election of the Volkskongress took place in Eastern Germany, of the 12,887,234 who went to the polls, 4,080,272 voted against the single Communist-sponsored list of candidates. In 1950 the Communist supervision of the electorate approached the Soviet model of efficiency.

Greece. A general election took place on March 5 and voting was by the proportional representation system and an exclusively male franchise. There were 39 constituencies, the largest being Athens returning 21 members, and Salonika with 18 members. Of about 1,860,000 voters 1,696,015 (over 91%, a record in a free country) went to the polls to elect the second Chamber of Deputies since World War II. There were 2,869 candidates under 26 different tickets standing for 250 seats (instead of 354 as in the Chamber elected on March 31, 1946). The results of the election, arranged from the Right to the Left, were as follows:

Parties	Votes	%	Seats
P.A.P. (Politiki Anexartitos Parataxis or Independent Political Rally; K. Maniadakis, K. Kotzias and Th. Turkovasilis)	137,721	8·1	19
National party (N. Zervas)	61,580	3·6	7
Populist party (K. Tsaldaris)	317,583	18·8	62
M.E.A. (Metopon Ethnikis Anadimiourghias or National Revival Front); P. Kanellopoulos, A. Sakellariou and S. Papadopoulos)	88,798	5·2	7
Liberal party (S. Venizelos)	290,983	17·2	56
E.P.E.K. (Ethniki Proodeftiki Enosis Kentrou or National Progressive Union of the Centre; N. Plastiras, E. Tsouderos)	277,812	16·4	45
Democratic-Socialist party (G. Papandreou)	180,085	10·6	35
D.P. (Dimokratiki Parataxis or Democratic Rally; I. Sofianopoulos, A. Svolos)	163,520	9·7	18
Others	170,705	10·1	4
Spoilt ballot-papers	7,228	0·3	—

As was expected, no party gained an absolute majority. The electorate cast a vote of censure against the Right-wing Populist administration and a mass of dissatisfied voters swung to the three centre parties of Venizelos, Plastiras and Tsouderos and Papandreou. The Communist vote, calculated in 1946 at 9·6%, went solidly for the Democratic group.

Turkey. It was in an entirely free and fair election that the Turkish people decided, on May 14, to end the 27-year rule of the Republican People's party (Cumhuriyet Halk Partisi) and to give the Democratic party (Demokrat Partisi), formed in Jan. 1946, an opportunity to try its hand. So clear-cut was the decision that the Democratic victory was overwhelming. Here is the composition of the new Grand National

Assembly (Büyük Millet Meclisi) compared with the position at the dissolution on March 27:

	9th Meclis	8th Meclis
Democratic party	408	34
Republican People's party	69	403
Nation's party (Millet Partisi)	1	21
Independents	9	7
Totals	487	465

Whereas on July 21, 1946, only 60% of the electorate went to the polls, on May 14, 1950, the proportion was over 80%, that is to say that out of some 9 million people entitled to the franchise about 7·2 million men and women above the age of 21 recorded their votes. Deputies are elected by majority system from multi-member constituencies identical with provinces or vilayets; as there is one seat for every 40,000 of the population, Istanbul with its 23 deputies is the largest constituency, but many vilayets in the sparsely-populated eastern region are represented by one deputy only. On Feb. 16 the electoral law was revised. While the electoral system remained unchanged, the procedure, especially the count of votes cast and the publication of results, was submitted to the strict supervision of the judiciary. The ex-president of the republic, Ismet Inönü, and the former premier, Semşettin Günaltay, undoubtedly approved such open demonstration of the trial of force. In effect, the election achieved a peaceful revolution the full consequences of which could not be foreseen. The major role in the event was that of the peasants, who voted not so much for the Democrats as against the long-existing one-party system, blaming it for high taxation, the high cost of industrial consumer goods and low agricultural prices. Although the election reduced the People's party parliamentary representation to one-sixth of its previous strength, the party obtained 39·9% of the total votes cast as against 53·6% which were given to the Democratic party.

Yugoslavia. The general election which took place on March 26 was in fact a plebiscite on the regime, with the odds weighted heavily in favour of the government. There were only 620 candidates for the 620 seats in the new National Assembly (Narodna Skupština), 405 in the Federal Council (Savezno Veće) and 215 in the Council of Nationalities (Veće Naroda). All were nominated by the government-controlled People's Front. Out of the electorate of over 9·7 million of men and women over 18 the total votes cast numbered 9,059,113 (93·4%) and 8,445,988 (93·3% of votes cast or 87·1% of the electorate) voted for the People's front. Each voter was given a pink or black ball at the polling stations to be placed in either the People's front ballot-box for the government or in the blank-vote box which meant against; to ensure fairness, every voter had to put his hands into both boxes in order that onlookers could not tell which way he voted. In all 596,315 persons in the whole country registered negative votes, including 358,165 in Serbia (9·3% of the total votes cast in this federal republic). The number of registered voters in 1950 was greater by 1,306,545 than at the election of Nov. 11, 1945; despite this increase, the number of abstainers was smaller, being approximately 670,000 against 950,000.

Soviet Union. The election of the Supreme Soviet (Verkhovny Soviet) of the U.S.S.R. took place on March 12. The Supreme Soviet is not a parliament in the western sense, nor does the periodical election correspond to western understanding for the word. Although for weeks before the vote millions of canvassers, officially described as "agitators," boasted that Soviet citizens enjoyed "the broadest democratic rights in the world," every detail of the electoral procedure was pre-determined and every candidate picked by the Politburo of the All-Union Communist party.

On Jan. 10 a decree of the presidium of the Supreme Soviet pointed out that in view of the expiration of the four-year term of office of the Supreme Soviet elected on Feb. 10, 1946, a new election was to be held on March 12. Two days later *Izvestia* published two other decrees enumerating and defining the 671 constituencies (instead of 656 in 1946) each of which was to return one deputy to the Soviet of the Union (Soviet Soyuza) and 631 constituencies to the Soviet of Nationalities (Soviet Natsionalnostiey)—the two chambers of the Soviet parliament. In fact, 678 deputies were elected to the Soviet of the Union and 638 deputies to the Soviet of Nationalities because in addition to the territorial constituencies there were in both cases 7 military electoral areas for Soviet troops stationed abroad.

As there is one member of the Soviet of the Union for every 300,000 of the population, the number of territorial constituencies would suggest that the total population of the U.S.S.R. increased between 1946 and 1950 from 196·8 to 201·3 million. The constituencies for the election of the Soviet of Nationalities are formed on a different basis according to the following quota: 25 constituencies, each electing one deputy, in each of the 16 union republics; 11 constituencies in each of the 16 autonomous republics within the Russian Soviet Federal Socialist Republic; 5 constituencies in each of the 9 autonomous regions of the R.S.F.S.R. and one constituency in each of its 10 small national districts.

Constituency conferences at which candidatures were "spontaneously" proposed initiated the electoral campaign. In every constituency appeared the name of Joseph Stalin as a candidate. After him other members of the Politburo collected large numbers of proposals headed (in the following order) by V. M. Molotov, G. M. Malenkov, L. P. Beria, K. E. Voroshilov, A. I. Mikoyan, N. A. Bulganin, L. M. Kaganovich, A. A. Andreyev, N. S. Khrushchev, A. N. Kosyghin and N. M. Shvernik, followed by M. A. Suslov, P. K. Ponomarenko and M. F. Shkiryatov, the secretaries of the central committee. In a collective statement on Feb. 17 these leaders announced to the public the constituencies in which, "by order of the central committee," they would actually be candidates.

On the day of election a great effort was made to bring the citizens to the polling-booths. A full list of electors in each district was exposed to view and each voter was required to sign his name before casting his vote, so that absenteeism was plainly discoverable. The results of the election to the Soviet of the Union of 1950, compared with those of 1946 were as follows:

	1950	1946
Number of registered electors	111,116,373	101,717,686
Electors who went to the polls	111,090,010	101,450,937
percentage of the total electorate	99·98%	99·70%
Electors who voted against the official candidates	300,146	819,699
percentage of electors who voted	0·27%	0·81%
Number of deputies		
Soviet of the Union	678	682
Soviet of Nationalities	638	657

That a larger population elected a smaller number of deputies was explained by the fact that the number of military electoral areas was greater in 1946 than in 1950. The 99·98% poll in 1950 was a record. The percentage of electors who went to the polls at six previous general elections were: 1927—50·2%, 1929—63·5%, 1931—70·9%, 1934—85·0% and 1937—96·8%.

United States. Elections on Nov. 7 resulted in a reduction of the Democratic majority in both houses of the congress. The composition of the 82nd U.S. congress, compared with the three preceding congresses, was as follows:

	Senate				House of Representatives			
	1944	1946	1948	1950	1944	1946	1948	1950
Democrats .	56	45	54	49	243	187	263	234
Republicans	39	51	42	47	190	246	171	199
Others .	1	—	—	—	2	2	1	2

The U.S. congress is composed of 96 senators elected for six-year terms (one-third of their number being renewed every two years) and of 435 representatives elected for two years. The total vote was 42,324,232 and that for the House of Representatives 40,351,862. The latter vote was divided in this way: Republicans 19,784,008 (49·03% of votes cast); Democrats 19,752,451 (48·95%); others 815,403 (2·02%).

(K. SM.)

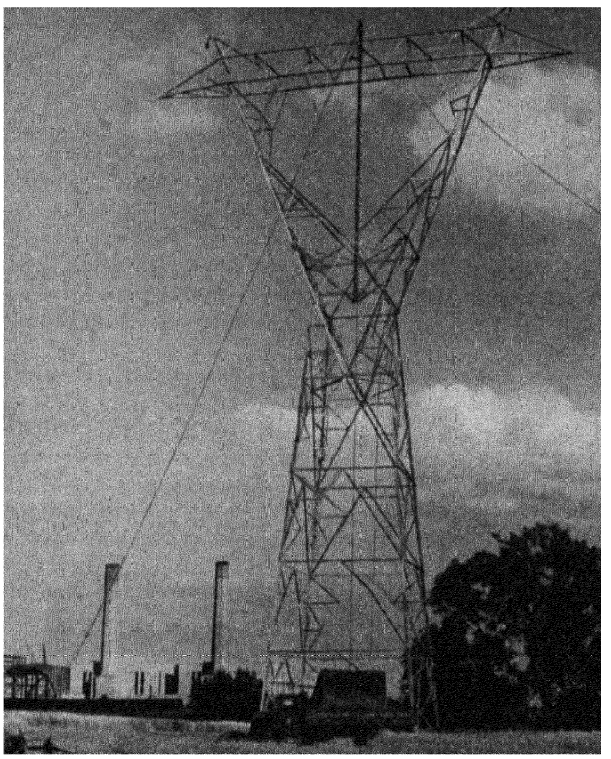
ELECTRICAL INDUSTRIES. *Generating Plant.* Developments in electrical industry reflected the continuing preoccupation of supply authorities with the construction of generating plant and transmission equipment to facilitate the transport of power and the interconnection of distant power sources. The second British Electrical Power convention held at Harrogate, Yorkshire, in June had as its main theme power-station design and operation. The largest size of generating unit in Great Britain was 100 Mw. compared with 160 Mw. and larger sets in fairly common use in the U.S.

Reports of productivity teams which had visited the U.S. in 1949 were received with great interest. It was especially noted that U.S. practice was characterized by larger generating sets, with hydrogen cooling on all new machines, higher steam pressures and temperatures—1,050°F being common—unit boilers without inter-connection and centralized control. Load factors were higher than in Great Britain. The time of construction and commissioning of new generating plant in the U.S. was almost exactly half that in Great Britain. To hasten power-station construction the British Electricity authority encouraged the production of boiler plant and ancillary equipment by manufacturers who did not formerly undertake it. Advances were being made by the design, on non-standard lines, of some of the authority's new stations, turbine conditions of 1,500 lb./sq.in. and 1,050°F being adopted as well as hydrogen cooling for the alternators.

Attention was given to the possibilities of feeding power into the public supply network from relatively small generating sets driven by industrial process steam and by other less conventional means. One of these sets, actually installed, had a 1,390-kw. induction generator and was operated in conjunction with a water-gas producer at Beckton gas works. Another unusual type of alternator, being built in sizes up to 150 kva., had a construction similar to that of an induction motor but had an amplifying exciter giving close voltage regulation without the use of a voltage regulator. It could also withstand accidental short circuits or out-of-phase synchronizing. Good progress was made in the construction of several gas turbine-driven generating sets of 15,000-kw. capacity for the B.E.A. and the North of Scotland Hydro-Electric board while a 750-kw. gas turbo-generator was installed in a private company's power station.

New developments took place in the design of cooling towers with the dual object of making them less unsightly and preventing the undesirable spill-over of water spray in their locality.

Transmission and Distribution Equipment. The construction of the British super-grid, at 275 kv., on which a start had been made, focused attention by manufacturers on circuit-breakers, transformers and other transmission equipment for use up to 300 kv. It became clear that air-blast switchgear was likely to be satisfactory for very high voltages and high breaking capacities and several new designs emerged. At the d'Harcourt sub-station of Electricité de France 220-kv. Alsthom breakers with a rupturing capacity of 350 Mva. were installed. Another



The first tower, erected in July 1950, of the Staythorpe-Barnby Moor section of a new 275-kv. super-grid.

type built by Brown Boveri of Baden, Switzerland, was to be supplied to Sweden for the new 380-kv. system. This three-phase breaker had a rupturing capacity of 8,600 Mva. at a maximum of 400 kv. Several breaks in series were used and the breaker was kept open by a continuance of the compressed air pressure. Designs for air-blast circuit breakers by British manufacturers also covered the range of voltages up to 400 kv. with rupturing capacities up to 10,000 Mva. while oil circuit-breakers with similar performance-characteristics were also built and tested. New testing stations had been built during the preceding two years to deal with the difficult task of carrying out performance-tests on switchgear of this kind.

Details were given during the year of the Fontenay testing station inaugurated in 1949 by Electricité de France. This was the only direct short-circuit testing station in Europe and the tests were carried out there in direct connection with the French 220-kv. system. This had the advantage of making a large amount of testing energy available without the expense of providing high-capacity alternators and transformers for a self-contained testing station. For switchgear testing the maximum symmetrical three-phase short-circuit power was 2,800 Mva. at 220 kv. but arrangements were being made for 3,900 Mva. to be available and also for 400-kv. tests. In the cable-testing section 220-kv. cables of both British and French manufacture were being tested. Experimental work on corona at voltages up to 500 kv. carried out in the U.S., France and Switzerland showed that power losses from this cause were not likely to be economically serious on 400-kv. lines.

Work on high-tension D.C. transmission continued in Great Britain and other countries. A transmission scheme between the Swedish mainland and the island of Gotland for commissioning in 1954 was under construction by the Swedish state power board. A single cable at 100 kv. to earth, with a return through the sea, was to be used to transmit 20 Mw. Later two cables, at 100 kv. positive and negative respectively, would be used, eliminating the sea return.

Exhibited during the year by a British insulator manufacturer was a 264-kv. porcelain cable-sealing end with a single piece of porcelain built to withstand an internal operating pressure of 200-250 lb./sq.in. An interesting cable development was a 3-core, 33-kv., aluminium-sheathed, impregnated pressure cable giving the advantages of economy, lightness and small diameter. Details were given of spun concrete poles used for 66 and 88 kv. lines in South Africa.

Utilization. In Great Britain lighting took an increasingly prominent place among electrical industrial activities and there were frequent examples, including that for the new House of Commons in London, of well-executed installations having exceptional interest. Fluorescent lighting for streets and public places made headway and costs of about £3,300 a mile were quoted for street lighting with concrete poles and complying with the requirements of Ministry of Transport Group A standards. Fluorescent lamps having tungsten filament ballast lamps as a resistance to avoid using an expensive choke were introduced. Another new lamp with an average efficiency of 45 lumens per watt was a 1,000-watt mercury-vapour lamp for use especially in spacious and lofty buildings.

The first coaxial submarine cable exclusively for voice frequency was put into service between Weybourne, Norfolk, and Esbjerg, Denmark. The laying of two new high-speed submarine telephone cables between the Netherlands and Denmark was also completed.

Outstanding developments in electric transport were the commissioning of an 827-h.p. diesel-electric locomotive by British Railways, the delivery of British equipment including a mixed traffic locomotive to Portugal, the construction for Uruguay of a fleet of trolley buses and the ordering by the Western Australian government of 48 diesel-electric main line locomotives. This order, of about £A 2·25 million, was the largest ever placed for such equipment with a British firm.

On farms and horticultural holdings electricity was used increasingly for crop drying, grinding, dairy sterilizing and soil warming. Other features were the popularity and the increasing number of new designs of battery vehicles and the extension and improvement of the applications of electricity on motor cars and in aircraft.

A new continuous strip mill for rolling aluminium sheet was opened in September at Newport, Monmouthshire. Its equipment represented the most advanced practice and applied new techniques in the fields of electronics, radio-activity and both light and heavy electrical engineering. The plant cost £3·5 million, had a potential output of 50,000 tons a year and was expected to take a peak load of 35 Mw.

Research and New Developments. The new research laboratories of B.E.A. at Leatherhead, Surrey, were opened. Here research was being undertaken on problems in the generation, transmission and distribution of electric power. Tests were in progress on an experimental high voltage line and on insulators and other transmission equipment. Research at the universities and at industrial and government research establishments included much on nuclear physics, light sources, high permeability magnetic materials, dielectrics and on the phenomena of superconductivity and supersonics. A unique electronic calculating machine employing 800 valves had been developed at Cambridge.

There were interesting developments connected with semiconductors and further applications were found for germanium rectifiers which have the advantages of very low capacitance and the absence of heating requirements. A newly developed material, with many applications in light current engineering, was synthetic sapphire.

Research and development work on new sources of energy was described at the World Power conference held in London in July. This included research on wind power for large scale generation of electric power, fed directly into supply networks, which was proceeding in Great Britain, France, Denmark, the Netherlands, Western Germany and Italy and for which an international co-operative research and development group was established by O.E.E.C. early in the year. Other developments concerned heat pumps, the industrial utilization of the temperature differences between water at the top and bottom of the sea—a French scheme—and the generation of power from volcanic sources at Lardarello, Italy. A new generating station under construction at Lardarello was to have four sets each of 26 Mw.

Trade. The value of all electrical goods exported from Great Britain attained a monthly average of about £11 million. As an example, in September—a rather poor month—the total was £10,159,538 which compares with £10,953,792 and £8,738,944 for the same month in 1949 and 1948 respectively. Imports rose from £290,069 in Sept. 1948 to £497,482 in 1950. Exports to Australia in Sept. 1950 were valued at £1,225,149 while those to South Africa, India, New Zealand and Canada were respectively £951,089, £780,438, £556,275 and £250,519. The U.S.S.R. took electrical imports valued at £241,397.

Great Britain supplied some 25% of all electrical imports by Norway. With electricity supply schemes planned for such countries as Persia and Pakistan export possibilities were opened up. There was a large market, especially for small electric motors (due to a very large frequency conversion), in Canada where British manufacturers enjoyed a preferential tariff, although the dominion's own electrical manufacturing industry had attained great importance, employing 53,000 workers at the beginning of 1950. In India the electric fan industry progressed to the stage of supplying all the country's requirements, the total fan manufacturing capacity being over 300,000 a year. India concluded a trade agreement with Germany including the supply of electrical goods and the training of Indian technicians.

The Electricity Supply commission of South Africa was to spend £54 million on electrical development programmes up to 1955 of which about half would probably be in the United Kingdom. Southern Rhodesia provided an increasingly important market for British electrical manufacturers and, with large development schemes such as Kariba gorge (6,000 Mw.) in prospect, was expected to continue to do so.

(E. W. G.)

United States. In 1950, the Federal Reserve board's estimated index of general industrial production was set at 212, 19 points above 1949 and one point above 1948, the record postwar year. The electrical manufacturing industry production index climbed to 493, 64 points above 1949 and 16 points above 1948. Appliances for domestic use broke the 1948 record of 1,040 points by going to 1,156 points in 1950, 275 points above 1949. The electrical material index rose from 310 points in 1949 to 399 points in 1950, 60 above 1948. After a drop to 373 points in 1949, electrical goods for industrial installation went to 469 points, only 13 below 1948. Apparatus for electricity supply systems continued to decline, dropping from 374 points in 1949 to 352 in 1950.

(F. J. K.)

ELECTRIC POWER. The process of bridging the gap between the available capacity of generating plant and that required to meet the ever-increasing demand for electrical energy continued in 1950 and gained momentum. Mounting political tension and consequent plans for rearmament further emphasized the urgent need for ample power for industry and, at the same time, caused further limitation on capital expenditure in some directions. Probably never before had there been such world-wide consciousness of the

importance of power production and of the natural resources which might be called upon for the purpose.

There was abundant evidence of this at two international conferences in June and July. The first, in Paris, was the 13th meeting of C.I.G.R.E. (Conférence Internationale des Grands Réseaux Electriques à Haute Tension) and the second was the fourth World Power conference in London, this being the first full meeting since World War II. The C.I.G.R.E. was concerned mainly with the transmission and control of electric power while the W.P.C. dealt with the sources and utilization of energy. The technical papers and discussions at the former conference showed clearly the great progress which had been made in the technique of electrical transmission and indicated that the transport of power from any generating point to load centres, however distant, was within sight of being technically possible. At the World Power conference emphasis was laid upon the high rate of consumption of the world's energy resources and the urgent necessity to develop new ones, many of which were discussed.

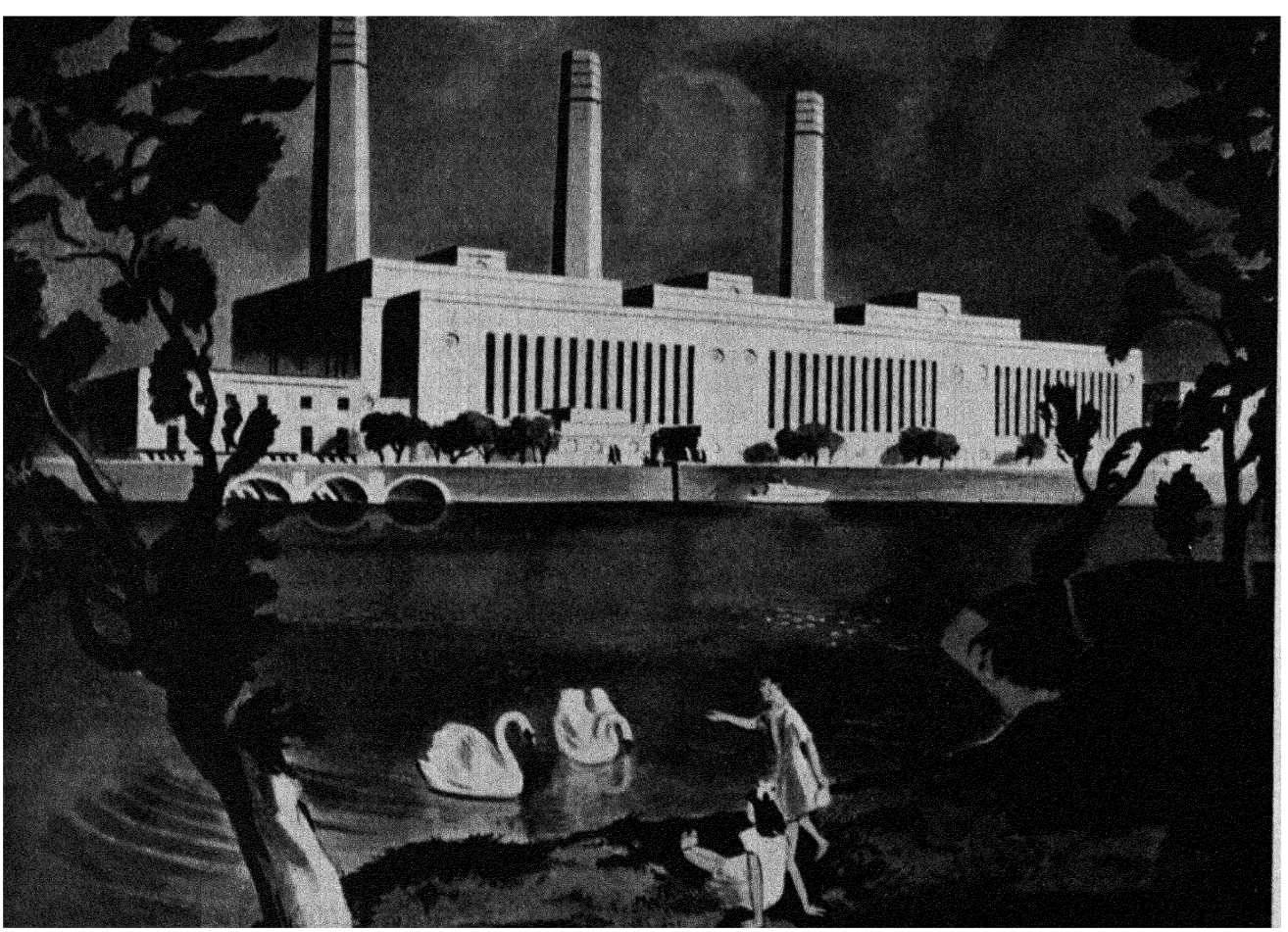
The second session of the Assembly of the Council of Europe and the Schuman plan for pooling coal-mining and steel-making resources drew attention again to the potentialities of a European power grid which would enable advantages to be taken of the diverse sources, both thermal and water power, and its utilization in widely separated parts of Europe. Discussions took place on the International control of generating plant which might become necessary if and when a grand European grid was brought into operation. Under the sponsorship of the Organization for European Economic Co-operation several international technical groups were established to undertake co-operative research and development in such subjects as the utilization of peat, underground gasification of coal and windpower.

ELECTRICITY SUPPLY IN EUROPE, 1949

	Installed generating capacity (megawatts)	Annual energy generated (millions of kwh.)
Austria	1,647†	4,800†
Belgium	2,850	8,200
Denmark	800*	2,000*
Finland	850*†	3,000*†
France	6,000*†	28,982†
Germany (French and British zones)	6,640†	32,500†
Hungary	1,400*	—
Italy	6,125†	21,650†
Netherlands	—	4,100†
Norway	2,996	15,000
Portugal	330†	800†
Spain	2,849†	6,100†
Sweden	3,500	16,100
Switzerland	2,880	11,250
U.S.S.R.	22,400*	82,000*
Yugoslavia	620†	2,169†

* Approximate. † 1948.

Great Britain. At the end of Dec. 1949 the British Electricity authority issued its first report, a most comprehensive document covering the period of operation Aug. 1947 to March 1949 but giving much information on the history and development of electricity supply in Great Britain. It showed that between the years 1921-22 and 1948-49 the number of units sold rose from 3,099·8 million to 39,054·3 million (out of over 46,000 million generated) and the number of consumers from approximately 1,100,000 to over 12 million. In the same time the average revenue per unit sold fell from



A painting by A. R. Thompson, R.A., of the new Staythorpe power station of the British Electricity authority.

2·482*d.* to 1·76*d.* although there had been a rise from the minimum (in 1939-40) of 1·016*d.* The number of units per consumer rose very little, being 2,840 in 1921-22 and 3,200 in 1948-49.

The B.E.A.'s second annual report, covering the year ending March 31, 1950, was issued late in December. It showed the number of units sold in the year to be 41,478 million (out of over 49,000 million generated). The number of consumers had risen to 12,634,000 and the average revenue per unit sold to 1·2*d.*

In 1950 good progress was made in the construction and commissioning of new generating plant. Three new stations, Staythorpe (ultimate capacity 360 Mw.), Croydon B (315 Mw.) and Stourport B (120 Mw.) were brought into operation and, by the end of October, the total installed capacity of the B.E.A. had risen to 14,213 Mw.) from a total of 13,284 Mw. in Oct. 1949. A record figure of 4,830 million units for electricity generated in Great Britain (including the North of Scotland) was attained for the month of Oct. 1950, an increase of nearly 15% compared with the same month in the preceding year. For the first 10 months of the year the total of generated energy, at 43,742 million units, showed an increase of 11·4% on that for 1949. Progress was made in the construction of a section of the 275 kv. super grid between Staythorpe and Sheffield. The interconnection of generating stations with an extra-high-tension transmission system might ease transport problems by allowing such stations to be located nearer to coal supplies.

The deficiency in generating capacity—still between 1½ and 2 million kw.—was being gradually made up, the vast programme of construction beginning at last to make itself felt. Power cuts were less frequent and of shorter duration but generating costs were rising. In spite of an over-all average efficiency of thermal power stations of over 21% the fuel component of the generating cost was approximately 0·42*d.* a unit. Reduction of the price of coal in the near future seemed unlikely and an increase in the cost of electrical energy to the consumer was foreshadowed.

Good progress was made in the construction of the North of Scotland Hydro-electric board's schemes and by the end of November the total installed capacity of generating plant had risen to 424 Mw. which showed an increase of 117 Mw. in 12 months. The loading of the Loch Sloy turbines played an important part in raising the monthly production rate from water power to 110 million units in October. The Loch Sloy station, which was opened by the Queen in October, had four 32·5 Mw. generators each driven by a 46,000-h.p. Francis turbine. The possible annual production from the station was estimated at 120 million units though it had been designed primarily for peak load operation supplying power to the B.E.A. network in southern Scotland. The board's annual report for 1949 showed that, in that year, 18,797 new consumers had been connected, making a total of 222,174. Eight hydro-electric schemes received parliamentary approval and the total capacity of all the schemes under construction, planned or surveyed was just over 100 Mw. with a potential annual output of more than 3,000 million units. In the 12 months ending Nov. 30, 1950, 835 million units were generated of which 498 million were from water power. Expenditure on distribution alone was at the rate of £2,500,000 a year.

Commonwealth. *Canada.* The annual consumption of electricity per head of population, at nearly 3,600 units, was the second highest in the world—mainly because of the wealth of water power—rapid development occurred during the year in an endeavour to overcome the difficulty in supplying the peak demand especially in Ontario. In that province three new hydro-electric developments, Tunnel, Pine Portage and Des Joachims, totalling 216,500 h.p. were opened and the total additional power to be made available in a seven-month period from June, 1950 was 676·5 Mw. At Des Joachims a total capacity of 480,000 h.p. was expected to be in operation early in 1951. Transmission from this station was at 230 kv. In Ontario also, a vast frequency standardization programme, changing over from 25 cycles to 60 cycles, affecting 800,000 consumers and taking 10 to 12 years to complete, was started.

Australia. In spite of an increased rate of electricity generation in Australia from 4,688 million units a year to 9,043 million during the preceding ten years there remained a shortage of energy. Three major hydro-electric schemes, Snowy river, Clarence gorge and Burdekin river were planned in addition to many short-term ones. Work on the long-term Snowy river scheme with an estimated potential capacity of 1,750 Mw. and a cost of £220 million had progressed so well that the first power from it might become available six years ahead of schedule. Again energy produced might be only half as costly as any already available in Australia. Three 25,000-kw. generators were ordered for the new hydro-electric station at Trevallyn, in Tasmania.

New Zealand. The total electricity consumption in the year 1949-50 was just over 2,500 million units. The rise in consumption was so rapid that new hydro-electric schemes were under way to add some 660 Mw. to the generating capacity, so rather more than doubling the existing capacity. It had been estimated that hydro-electric sources in the north island would be fully in use in the next 10 to 20 years, which would thereafter require some 100 Mw. of additional capacity annually. Transmission of power from the south island across Cook strait was being considered. The possibility of getting power from geo-thermal steam was being investigated.

South Africa. Electricity consumption in the Union was 6,222 million units in 1949 and, to meet increasing demand, plans had been drawn up for expansion of generating capacity at a cost of £54 million during the period to 1955.

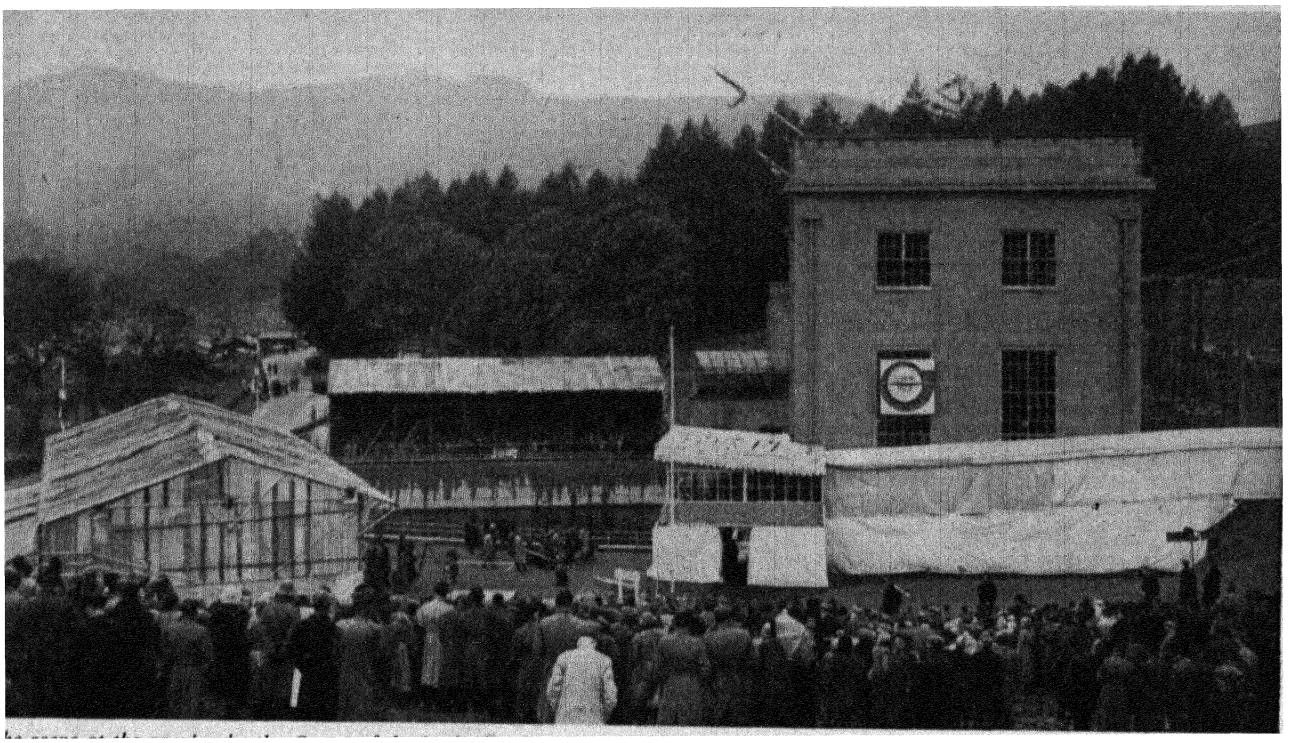
Southern Rhodesia. During the year ended March 31, 1950, sales of electrical energy in Southern Rhodesia were 219 million units, an increase of 26·8% over the previous year's.

India. The production of electrical energy in India during 1949 was 4,900 million units and the total installed capacity was 1,540 Mw. The Chambal valley project capable of generating 775 Mw. was under construction.

Pakistan. In Pakistan, where considerable water power resources awaited development, five hydro-electric schemes totalling 207 Mw. were expected to be completed within the next six years.

Europe. Reports by the national committees at the fourth World Power conference in July furnished information on the latest position of electricity supply in most European countries. This is shown in the table, which includes also information from other sources. Good progress was made with the many hydro-electric schemes previously planned and new schemes included one in Iceland aimed at doubling the nation's electricity supply by the installation of 53,500 h.p. at hydro-electric stations at Ira falls and Bruar falls. Another scheme, announced by the Russian Council of Ministers, was for a five-year development programme on the River Volga including a 2,000 Mw. station near Kuibyshev. Three new power stations including the first large turf-burning station at Portarlington were brought into commission in Ireland during 1949-50 and rapid progress was made in rural distribution. (E. W. G.)

United States. Evidence of a speed-up in industrial activity in the United States was seen in the records of the U.S. electrical industry for 1950. Energy produced for the public supply in that year climbed to an estimated 329,028 million



The scene at the opening by the Queen of the Loch Sloy hydro-electric scheme in Oct. 1950. This was the first major scheme of the North of Scotland Hydro-Electric board to be put into operation.

kwh., an increase of 13% over the 291,099 million kwh. generated in 1949 and the largest increase ever recorded in the industry's history. This increase of 37,924 million kwh. may be compared with the previous year's increase of 8,401 million kwh. To generate this output in 1950, the average kilowatt of hydro capacity produced at name plate rating for 64·5 hr. out of every 100, surpassing any year on record. Fuel capacity produced at name plate for about 55 hr. out of every 100. Fuel-burning power plants furnished 32,245 million kwh. of the total increase of 37,924 million kwh., raising the proportion of fuel power generation from 69% in 1949 to 71% in 1950, the hydro plant share in output thus dropping from 31% to 29%. Of the total output in 1950, private power companies generated 81·3% as against 80·3% in 1949, with plants owned by Rural Electrification administration co-operatives, municipal utilities, public utility districts, state projects and the federal government providing the remainder.

Power Plant Capacity. The increase in generating capacity in 1950 up to Nov. 1 was 4,409,000 kw., bringing the total as of that date to 67,509,000 kw. The actual increase in 1950 was somewhat more than this, with some new capacity scheduled for operation in November and December. The reported new capacity installed in 1950, not all representing net increase, was 5,785,814 kw. Preliminary figures set the non-coincident peak load at about 62 million kw. and indicated that reserve capacity would be about 9% or about 3% less than the 1949 reserve.

Ratios of fuel and hydro generating capacity remained little changed in 1950 from 1949. In the earlier year, fuel power was 73·5% and water power 26·5% of the total; in 1950 the ratios were 74% and 26%. In 1950, power companies owned 79·8% of the generating capacity as against 79·9% in 1949. Ownership of the remaining capacity was divided among R.E.A. co-operatives, municipal utilities, public utility districts, state projects and the federal government.

(J. W. J.)

ELECTRIC TRANSPORT. Political and economic difficulties were still restricting railway electrification during 1950, and little progress was made. Marshall aid programmes were revised and the large capital outlay necessary had, in some cases, resulted in the deferment of authorized schemes. Other constructional work suffered from a shortage of labour and materials. In Great Britain and in Europe, with the possible exception of Sweden, traffic receipts were declining; and it was increasingly difficult to effect any large scale economy in working. The problem had to be examined with full knowledge of local circumstances against a national economic background.

There were minor improvements in design and a praiseworthy reduction in weight, notably by Swiss engineers, in electric tractors and traction equipment; but there were no major developments. The important trials of the 50-cycle per second single-phase system were begun in France, and the results were eagerly awaited.

Neither Europe not the British Commonwealth could show any development of diesel electric traction comparable with that in the U.S., but the British manufacturers had received large orders for main-line diesel electric locomotives. In the autumn of 1950 the Western Australian government ordered 48 of these locomotives, valued at £2,250,000.

Great Britain. The report of the Railway Electrification committee (1948) was submitted to the minister of transport and subsequently approved for publication.

Other committees were set up to prepare schemes for the electrification of the London-Tilbury-Southend line and to examine the planning of future transport services, with special reference to railway electrification in and around Glasgow. Work on the 1,500-v. D.C. electrification of the Manchester-Sheffield-Wath line proceeded, with trials of three B_0+B_0 1,740-h.p. mixed-traffic electric locomotives. Of the 25 to 50-cycle conversion-schemes, those for the Liverpool-Southport and Euston-Watford lines were completed; and authority was given for a similar change-over on the Southern region's lines in the London area. Traffic on the newly electrified Liverpool Street-Shenfield (Eastern region) line continued to increase.

The London Transport executive deferred the proposed extension of the Bakerloo tube to Camberwell Green and did not consider the Northern extension from Edgware to

Bushey Heath justifiable because of proposals for the establishment of the " green belt " in that area.

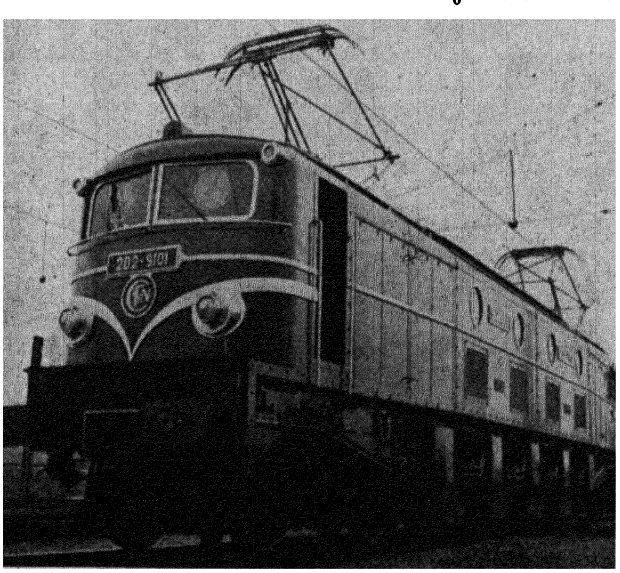
In March a convention on electric railway traction was held at the Institution of Electrical Engineers: papers on all aspects of railway electrification were presented and discussed.

In 1927 Great Britain had 15,000 modern tramcars (with rubber-cushioned wheels and gears, multinotch control and dynamic braking); this number had dropped to 6,000 in 1950. The trolley bus had to some extent superseded the tramcar, but the shortage of coal and the lack of generating plant had not helped this development. The quickest growth had been between 1935 and 1940. In 1950 there were some 5,000 trolley buses at work in Great Britain, but they had a serious competitor in the diesel bus. The use of a compound wound non-regenerative motor with rheostatic braking was generally favoured, and there was a growing demand for automatic acceleration. An added advantage was the provision of a battery to enable the vehicle to be operated for a short distance under its own power.

Austria. Progress was made on the two great cross-country electrifications. On the north-south route from the German frontier at Salzburg to the Italian frontier at Tarvisio (134 mi.) the section between Spittal-Millstattersee and Villach (23 mi.) was completed in May, leaving only the portion from Villach to Tarvisio (17 mi.) to be electrified. On the 527-mi. east-west route from Hegyeshálom on the Hungarian frontier to Bregenz on Lake Constance electric working was in operation from Linz to Bregenz; the section Linz-Vienna (117 mi.) was under conversion but work had not started between Vienna and Hegyeshálom (49 mi.). The first batch of postwar electric locomotives manufactured by the Wiener Lokomotivfabrik and electrical equipment by Elin A.G. were delivered early in 1950.

France. In Oct. 1950 the Paris-Laroche section of the Paris-Lyons main line was opened for electric traction. As regular electrical operation on the Laroche-Dijon section had begun in March, electric locomotives were now hauling all classes of traffic between Paris and Dijon (197 route mi.). The electrification of this section was carried out according to programme, and it was hoped to complete the conversion to Lyons in two years. Altogether 1,125 route mi. were planned for electric operation, saving a further 1,600,000 tons of coal a year in addition to the 1,300,000 tons already saved by electrification.

The first of the batch of 35 new 2-D_0-2 locomotives for fast passenger and freight work on the Paris-Lyons line was delivered. The design was developed from the most successful of similar locomotives working on the P.O.-Midi system. The four traction motors gave a total one-hour rating of 4,880 h.p. or a continuous rating of 4,400 h.p. at 1,350 v. Compensating windings made possible a minimum field of 29·5% of the full value, while 24 economical running-speeds were available. The four traction motors were mounted rigidly on the frame and flexible transmissions of the Buchli-link type employed. The underframe was of welded construction with riveted cross members. The locomotives hauled trains of 880 tons on the level at 86 m.p.h. or 980 tons on a 1 in 200 gradient at 60 m.p.h.



A new 4,800-h.p. electric engine introduced into service on the French national railways in 1950.

Work progressed on the experimental supplying of 50-cycle single-phase traction between Aix-les-Bains and La Roche-sur-Furon (48 mi.). The temporary feeding point at Annecy for the trials comprised two Scott-type 45,000/20,000-v. 3-phase to 2-phase transformers connected so that one output-phase feeds the section to the north and the other that to the south of Annecy. Meanwhile the first of the three experimental motor coaches was put on trial in the French zone in Germany: equipped with 2×480 h.p. 50-cycle A.C. traction motors of new design, the vehicle was converted from a $16\frac{2}{3}$-cycle motor coach.

Germany. During May the main line Nuremberg-Regensburg ($62\frac{1}{2}$ mi.) was converted to electric traction, linking up with the 15-kv. $16\frac{2}{3}$-cycle single-phase electrification in that area. Preliminary work was then begun on other Bavarian lines, notably the 119 route mi. between Nuremberg, Würzburg and Aschaffenburg with a possible extension of 29 route mi. to Frankfurt. In addition, first steps were taken to convert the double-track main line Mannheim-Basle (166 route mi.). A large thermal power station was being built in the Bavarian Alps near Penzberg with an ultimate annual output of 200 million kwh.

Because of the doubtful financial position of the German federal railways a close investigation of the economics of electrification was carried out by the Marshall aid authorities. The German authorities claimed that electrification would reduce working-costs and were eager to convert a number of lines in the Ruhr and Rhineland linking up with the existing electrification in southern Germany. Under the " Arnold plan " 600 to 800 route mi. were to be converted in eight years, including the two main lines parallel to the Rhine and other important north-south lines. The American view was that the electrification should be postponed for at least five years, and an E.C.A. allocation of DM. 58 million to the federal railways was cancelled.

Italy. Electrification on the Rome-Avezzano line (67 mi.) was extended for $40\frac{3}{4}$ mi. to Sulmona in May. This extension covered the most difficult part of the 149-mi. single-track Rome-Pescara main line. Further funds were being sought to pay for the completion of the Rome underground railway begun 12 years previously, to link the Central station with the southern suburbs and Ostia. A further alternative scheme for an underground railway in Milan was under consideration by a joint Italian-Swiss company. The increasing demand for electric power for traction was being met by the development of two new hydro-electric power stations on the Tanaro, south of Turin and by the enlargement of those near Bressanone on the Brennero line; and also by building two thermo-electric stations in Sicily for the electrification of the Messina-Palermo line under construction. In addition, a scheme was considered for the erection of two more geothermic power stations, totalling 250,000 kw. in the Lardello region in Tuscany.

Portugal. A 1,120-h.p. mixed-traffic locomotive and seven multiple-unit coaches were built in Great Britain for the 5 ft. 6 in.-gauge 1,500-v. D.C. overhead electrified line from

Lisbon to Cascais (16 mi.), to haul passenger trains of 240 tons at 50 m.p.h. or goods trains of 600 tons at 30 m.p.h.

Sweden. Because it was difficult to accommodate high-voltage single-phase A.C. equipment in small rail cars, it was the practice in Sweden to use diesel rail cars for light passenger services on branch lines. By 1950, however, a diesel rail car converted to electric working, with 45 seats and weighing 16 tons, was capable of hauling a trailer and, when working independently, had an acceleration of 1·6 m.p.h. and a normal running-speed of 55 m.p.h.

Rolling stock for the Stockholm underground (650 v., third rail) was under construction. All cars were to be motored and an average speed of 20 m.p.h. maintained, including 15-sec. station stops, two-fifths of a mile apart. Electric equipment of Westinghouse design for the first 200 cars was to be manufactured by the Swedish A.S.E.A. company.

Switzerland. The short and steeply graded metre-gauge line between Le Locle and Les Brenets (Neuchâtel) was electrified: the line is three miles long with gradients of 1 in 33. Electric services were also begun in May on the private metre-gauge line between La Chaux-de-Fonds and Ponts-de-Martel (17 mi.).

After World War II the Swiss federal railways devoted considerable attention to light-weight electric locomotives. B_0-B_0 locomotives of the Re 4/4 class delivered during 1950 had an adhesive weight of 57½ tons, a total one-hour rating of 2,500 h.p. and a maximum speed of 77·5 m.p.h. and could haul trains up to 450 tons. By the use of light-weig',t electric locomotives and motors the Swiss federal railways increased scheduled speeds to a remarkable extent. During the summer 18 daily runs were scheduled at speeds of 60 to 69 m.p.h. from start to stop.

Australia. Electrification of the line, with double tracking, between Newport South and Geelong was recommended at an estimated cost of £1,200,000; the expected yearly saving was £52,000. A steady increase of traffic necessitated the doubling of the single-line electrified route to Heidelberg, north of Melbourne; and a new electrified branch was authorized from Alphington to East Preston.

The electrification of suburban lines in Adelaide was considered. The lines in question were the Adelaide Hills line to Belair, the Brighton Marine line, the main North line as far as Dry Creek, the Henley Grange line and the Port Adelaide line to Outer Harbour. The total cost was estimated at £A 4 million, but under the Rail Standardization Agreement act the Commonwealth government would contribute about 70% of the cost.

Forty 6-axled (all motored) 108-ton electric locomotives of 3,780 h.p. (one hour) were ordered in England by the New South Wales government for handling coal traffic on the Sydney-Lithgow line under electrification.

South Africa. Progress toward the entire electrification of the inner Reef area advanced with the completion of the equipment at the change-over point between steam and electric traction at Welverdiend, the western terminus of the Witwatersrand electrified system. The extension to Welverdiend involved the electrification of the lines between Nancefield, Midway and Bank stations and between Randfontein and Welverdiend at a total cost of £900,000. The conversion of the main line between Capetown and Touws River (160 mi.) proceeded. (J. W. GE.)

United States. *Subway and Elevated Rapid Transit.* At the beginning of the year the rapid transit lines in New York, Chicago, Philadelphia, Cleveland and Boston were carrying a combined total of about 2,300 million passengers a year. To do this they operated approximately 10,000 cars on 1,250 mi. of track. Chicago, with the delivery of 130 new subway cars, was the only city to add to its rolling stock in 1950. A trend was in evidence to eliminate gradually the remaining elevated railway lines and replace them by subway lines. Steps to this end were taken in New York and Boston. Extension and improvement was made in the rapid transit facilities serving the east Boston area. New rapid transit facilities were planned at Cleveland. In the interest of civil defence and municipal economy, New York city's plans for expansion were somewhat curtailed. It had been planned to start work early in 1951 on a new subway line along Second avenue to replace the former elevated railway service on that street and the existing service on Third avenue, and to purchase 350 new subway cars.

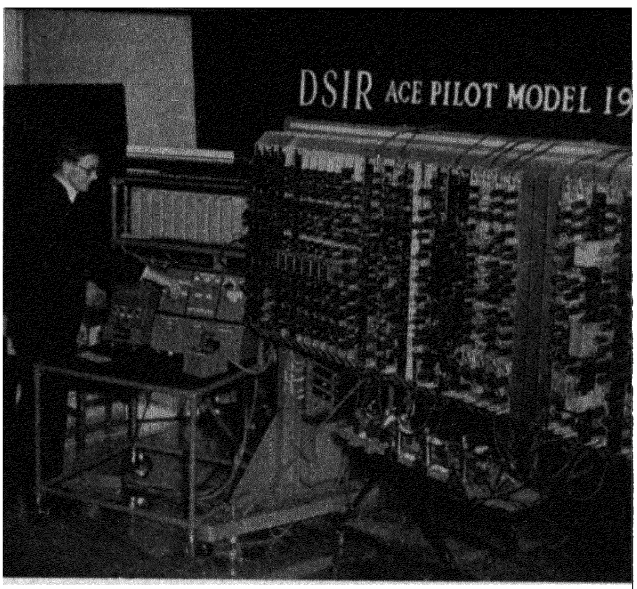
Electric Surface Railways. At the beginning of 1950 the transit industry in the U.S. had approximately 15,500 electric surface railway cars and about 10,700 mi. of track. Approximately 75% of the vehicles were in cities of more than 500,000 population. The business handled by these lines in the larger cities amounted to about 3,500 million passengers a year. Traffic declined during the year.

Electric Trolley Coaches. Expansion of electric trolley coach operations was one of the outstanding features of the year. Orders were placed for a total of 820 of these vehicles, but not all of these were built and delivered within the year. At the beginning of 1950 trolley coaches in the U.S. were carrying passengers at a rate of 1,700 million annually. By the end of the year this had increased to 2,200 million. With the large increase in trolley bus operations planned for 1951 this type of service appeared likely to surpass rapid transit in volume of traffic.

Heavy Electric Traction. No substantial change occurred during 1950 in the scope of electrified trunk-line railroad operation. At the close of the year two 5,000-h.p., 11,000 v. A.C. straight electric locomotives were in production for the Pennsylvania railroad. The Chicago, Milwaukee, St. Paul and Pacific railroad purchased 12 units originally built for export to the U.S.S.R. but never shipped. (J. A. MI.)

Canada. Trolley-bus transportation continued to increase in popularity with management and public. By the end of 1950 Vancouver street-cars were confined almost solely to downtown areas; Winnipeg added 30 new trolley buses; Hamilton, Ontario, introduced trolley buses; in Toronto, however, where 85 trolley buses were in use, transportation officials continued to believe that street-cars were preferable for handling rush-hour traffic. Construction of Toronto's electric underground system continued during the year. (C. CY.)

ELECTRONICS. The word electronics covers the development and use of a wide variety of equipment using vacuum tubes in various forms. Progress in this field during 1950 was conspicuous not so much for the introduction of novel techniques or devices as for the steady and very appreciable advances made in the conversion and extension of laboratory apparatus into equipment suitable for direct application in industrial, medical and other organizations. It was emphasized that to achieve success in this conversion, electronic equipment, and particularly measuring instruments, had to be designed for factory and not laboratory conditions. It was important to bear in mind the actual physical conditions under which an instrument would be used. Furthermore, considerable maintenance problems were experienced by industrial users, who in many cases were dependent upon staff without high technical qualifications to do this type of work. It was therefore found necessary to achieve the greatest possible simplicity of design, from both electrical and mechanical standpoints; and to ensure collaboration between the designer and user throughout the whole of the development work. The success of pursuing the subject along these lines was admirably demonstrated in the items of equipment displayed at the various electrical, radio and scientific



The automatic computing engine (the "ACE")—an electronic calculating machine shown at the National Physical laboratory, Nov. 1950.

exhibitions which were held throughout the year. It was evident that there was continued interest in the application of electronic methods to industrial processes and to nuclear physics and its associated developments.

Instruments. A wide range of electronic instruments was made available; some extended the range and precision of measurement of electrical quantities, while others were designed for observing and measuring phenomena of a non-electrical nature, such as the speed of rotation of a shaft, or the operation of the moving shuttle of a textile loom. Improvements were made in instruments for measuring very small direct currents or voltages, such as those obtained in ionization methods, in heat-detecting devices and in certain electrolytic techniques. This advance resulted in, among other things, a novel type of thickness gauge, in which the quantity of beta-ray radiation was measured before and after passing through a sheet or film of material in which part of the radiation was absorbed. The ratio of the transmitted to the incident radiation is a function of the quantity of matter traversed; and the instrument could be calibrated directly in terms of thickness of material for a given density. The method could be applied to both metals and to non-metallic materials such as paper or rubber, and the material under examination could be moving at high speed. The output of the instrument could be made sufficient to drive recorders, or servo-mechanisms for automatic process control.

Ultra-sonics. One of the directions in which considerable research had latterly been carried out was in the adaptation of radar and electronic techniques to the use of ultra-sonic waves for various purposes. In one application sound waves in air about one centimetre in length were used for detecting obstacles, such as persons, walls and kerbs at distances of from 8 to 20 ft. It was possible that developments of this nature would result in equipment which would serve as an aid to the blind in walking, or as a safety-in-fog device for road transport. Other types of ultra-sonic equipment and devices were described and exhibited at the International Convention on Ultra-sonics in Rome in June 1950. Among the commercial items exhibited by French, German and Italian firms were instruments for biological and medical purposes, a flaw detector for locating air films in uniform or laminated material, and equipment for producing 300 watts of ultra-sonic energy, the main application of which seemed to be for irradiating various liquids, including the ageing of spirits. Mention may be made here also of various types of ultra-sonic generators which were made by British firms, giving outputs varying from 250 to 1,000 watts and for frequencies ranging from 15 kc./sec. to 2 Mc./sec., depending upon the application for which the generator was required. These equipments were intended for general research work, for various physical, chemical and metallurgical investigations and even for the soft soldering of aluminium without the use of flux. Investigators in the field of ultra-sonics became interested in the properties of barium titanate for piezo-electric applications; as a transducer, this compound appeared to have certain advantages over materials such as quartz and rochelle salt, which were hitherto more commonly used.

Electron-optics. The introduction of electron-optical methods opened up wide new fields of experimental work for studying the surface properties of materials and the manner in which these properties are responsible for photo-electric or thermionic emission or are affected by mechanical wear, lubrication and corrosion. Concurrently with research in this field, improvements took place in the design and construction of commercial forms of electron microscopes. These instruments now provided a wide range of amplification up to a maximum of 20,000, with a reduced length of column and a simplification of controls and arrangements for both visual observation and photographic recording. The specimen and the photographic plate could be quickly changed, so that rapid working was achieved in routine technological applications, such as for particle-size analysis.

There was also continuous progress in the field of electronic computer development; various types of instruments depending upon different principles were being tested in the prototype laboratory stage, before being applied to their ultimate objective of high-speed mathematical computation. Interest in this field had increased rapidly in latter years, and at the same time a study of the principles of information theory was undertaken. This subject is of interest, not only to the communications engineer and the mathematician, from the viewpoint of securing the maximum economy in the transmission of information or the efficient carrying out of complicated calculations, but also to the biologist who seeks to gain a better understanding of the mode of operation of the nervous system, which is responsible for human intelligence. (R. L. S.-R.)

United States. Animal experiments showed that so-called "brain-waves"—periodic electrical impulses produced in the brain that may be recorded on an electro-encelphalograph—undergo a characteristic change as anaesthesia deepens. At the lightest stage the total output of electrical energy from the brain, as measured by the height and duration of the recorded waves, is at a maximum. The energy output then progressively lessens until, at a level coinciding with respiratory paralysis, it becomes almost zero.

At the Mayo clinic, Rochester, Minnesota, R. G. Bickford and A. Faulconer used these changes to regulate the rate at which anaesthesia was administered to the patient. Electrodes on the scalp picked up the brain waves, which were amplified in the electro-encephalograph and made the usual record. Also connected to the device was an electronic integrator which stored the amplified energy from the patient's brain until it reached a predetermined amount and then released it, and the storage began anew. The energy discharge at the end of each cycle triggered a relay, which activated a pump giving a definite amount of anaesthetic to the patient. Thus, when the brain was most active under light anaesthesia, the anaesthetic was administered most often. Its rate was reduced as anaesthesia became more profound. It was pointed out that the device did not replace the expert, who still had to supervise its operation, but relieved him of much tedious work.

Another electronic control device announced during the

year was one for regulating the exposure of low-altitude aerial photographs made from reconnaissance planes travelling at speeds of 600 m.p.h. or more. Because of quickly changing light conditions, very rapid adjustment of exposure is required, particularly when using colour film. The new device, developed by George Bruck, John Higgins and John Ward, was first applied to a modified U.S. air force model S-7 camera with stereo lenses, a type in which the exposure is made by moving the film past a slit. The film is moved at such a rate, determined by the speed of the plane and its altitude, that its motion corresponds to that of the image. The adjustment for light conditions is made by changing the lens aperture. A third lens was used to pick up the light and focus it on a selenium photo-cell which, through an electronic circuit, adjusted the apertures of the taking lenses. A difference in illumination of as much as 40 to 1 was automatically compensated.

Among new devices described at the sixth annual national Electronics conference at Chicago in Sept. 1950 was one which automatically measured water content in snow on mountainous areas and reported its findings by radio to a central station. These measurements are important in regions where melting snow provides water for power and irrigation. The new system, devised by R. W. Gerdel of the U.S. Weather bureau, made use of a small sample of radio-active material buried near the surface of the ground. Suspended above was a Geiger-Muller counter which responded to the radiation from the sample. As snow accumulated below the counter tube, the radiation was attenuated in proportion to the water content.

At the Radio Corporation of America laboratories near Princeton, New Jersey, project " Typhoon " was completed. This was an electronic computer, built by the R.C.A. for the U.S. navy. It was designed, under the direction of Arthur W. Vance, to evaluate performances of guided missiles, aircraft, ships and submarines and to aid in the air protection of U.S. cities. It was said to be capable of solving complex simulated problems of a complete guided missile system which other computers had been unable to handle. The heart of " Typhoon " was a new type of electronic multiplier that blended the techniques of the analogue computer, similar in principle to a slide rule, and the digital apparatus, exemplified by the ordinary adding machine. Even to give an approximate answer to one typical problem, a mathematician and assistant would probably have required six months. " Typhoon," in less than 60 sec., gave the continuous solution, for an infinite number of points.

Herbert Jones of the University of California found that very-high-frequency radio waves were capable of improving the germination of carrot, beet, onion and tomato seeds. He exposed the seeds to uniform electrical fields which caused the absorption of energy, some of which is converted into heat, at various points in the seed. At Cornell university, Ithaca, New York, F. V. Kosikowsky, B. L. Herrington and A. C. Dahlberg found that cheese may be made bacteria-free by pasteurizing it with radio waves after the cheese has aged. It was reported by L. A. Manning, O. G. Villard, Jr., and A. M. Peterson of Stanford university, Stanford, California, that radio waves, reflected from the trails of broken or ionized atoms left by a meteorite passing through the atmosphere at altitudes of from 56 mi. to 68 mi., make it possible to measure wind velocities at these heights. Such altitudes are well above those reached by sounding balloons, and though rockets reach them they do not stay in one place long enough to get determinations of wind direction and velocity. Even though it is brief, the trail may have time to be moved appreciably by the winds aloft. Because of its motion, the frequency of the radio echo may differ somewhat from the original signal. By measuring this shift, caused by the Doppler effect, the Stanford scientists were able to determine the wind velocity and direction. (J. STO.)

ELIZABETH ALEXANDRA MARY, PRINCESS, DUCHESS OF EDINBURGH, the heiress-presumptive of the British throne (b. London, April 21, 1926), accompanied the King, the Queen and Princess Margaret on a state visit to South Africa in early 1947 and celebrated her 21st birthday in Capetown. She married Prince Philip, Duke of Edinburgh, on Nov. 20, 1947, and on Nov. 14, 1948, gave birth to a son, Prince Charles Philip Arthur George.

In Jan. 1950 Princess Elizabeth visited the new town site at Crawley, Sussex, where she named a new road " Manor Royal " and, as Chief Ranger of the British empire, attended a conference of county Rangers advisers at the Girl Guides association headquarters, London. In February she visited the Master Mariners' company's headquarters ship " Wellington " at Temple Stairs, London, the Warehousemen, Clerks' and Drapers' schools at Addington and Purley, Surrey—where she opened sites for building extensions—and the Sailors' home and Red Ensign club in east London. In the same month she was admitted to membership of the Royal Institution, London. In early March she opened the Bath Teachers' Training college, Newton Park, Somerset, unveiled the civil defence memorial windows in Bristol cathedral, and visited the headquarters of the Severn Wildfowl trust, Slimbridge, Gloucestershire. Later in the month she opened the Andrew Duncan holiday home for boys at Shiplake-on-Thames, Oxfordshire, and presented prizes to London Chamber of Commerce examination candidates. From March 28 to April 10 she visited Malta, where the Duke of Edinburgh was stationed as first lieutenant in the destroyer " Chequers." On Aug. 15 at Clarence house, London, Princess Elizabeth



Princess Elizabeth, Duchess of Edinburgh, with her children Princess Anne and Prince Charles, in the train at King's Cross station, London, on their way to Balmoral. Sept. 1950.

was safely delivered of a daughter who was christened Anne Elizabeth Alice Louise at Buckingham palace on Oct. 21. On Nov. 17 Princess Elizabeth visited R.A.F. Fighter command at Stanmore, Middlesex. On Nov. 25 she flew to Malta to join the Duke of Edinburgh; in December they paid an informal visit to Greece as guests of the King and Queen of the Hellenes.

EL SALVADOR: *see* SALVADOR, EL.

EMPIRE GAMES. The great success of the Fourth Empire Games at Auckland, New Zealand, from Feb. 4 to Feb. 11, 1950, showed that these games were rapidly coming to mean as much to the empire as the Olympic Games meant to the world as a whole. The first of these four-yearly meetings was staged at Ontario, Canada, in 1930 followed by further gatherings in London (1934) and Sydney (1938).

Embracing the nine amateur sports of athletics, bowls, boxing, cycling, fencing, rowing, swimming, weight-lifting and wrestling, the competition lasted seven days and was attended by nearly 300,000 people. Besides the host country, New Zealand, the 11 other members of the Commonwealth who sent teams were Australia, Canada, Ceylon, England, Fiji, Malaya, Nigeria, Rhodesia, Scotland, South Africa and Wales.

The track and field events, staged at the Eden Park stadium, were the most popular and attracted the most competitors. The 20 men's and 18 women's events that comprised the athletic programme were carried through in four days and produced 13 games records. A most remarkable feature was the breaking of every single women's series record except the high jump record which was equalled by the holder, Dorothy Tyler (England).

The Australians won nine men's titles, including a sprint "double" by J. F. Treloar in 9·7 sec. and 21·5 sec., the 440 yd. in 47·9 sec. (equalling the record) by E. W. Carr, both the 4 x 110 yd. and 4 x 440 yd. relays, and the high hurdles in the record time of 14·3 sec. by P. J. Gardner. J. A. Winter, Australia's Olympic high jump champion, added another victory to the Australian score with a 6 ft. 6 in. jump; I. M. Reed's 156 ft. 7 in. discus throw was the best achieved by an Empire athlete. Perhaps the best single performance was a hop, step and jump of 51 ft. 2½ in. by B. Oliver (Australia).

As well as J. T. Holden's epic marathon, in which he was obliged to cover the last 10 mi. barefooted, England won the half-mile (H. J. Parlett, 1 min. 53·1 sec.), the 3 mi. (L. Eyre, 14 min. 23·6 sec.) and the pole vault (T. D. Anderson, 13 ft. 0⅛ in.). Canada unexpectedly captured the mile title in which Eyre was beaten on the run-in by C. W. Parnell in 4 min. 11 sec. L. J. Roininen, also of Canada, won the javelin event with a modest 187 ft. 4¼ in. Ceylon (D. White, 440 yd. hurdles, 52·5 sec.), Fiji (M. Tuicakau, shot-put, 48 ft. 0¼ in.), Scotland (D. McD. M. Clark, hammer, 163 ft. 10¼ in.), South Africa (N. G. Price, long jump, 24 ft. 0 in.) and New Zealand (W. H. Nelson, 6 mi., 30 min. 29·6 sec.) each took one title.

The outstanding figure of the women's athletics was Miss M. Jackson (Australia), who equalled F. E. Blankers-Koen's 100 yd. world record of 10·8 sec. and followed this up by running the 220 yd. in 24·3 sec., which equalled Miss S. Walasiewicz's world record of 1935. Other outstanding performances in this section were the 80 m. hurdles victory of Miss S. B. Strickland (Australia) and the 19 ft. 4⅝ in. which gave Miss Y. W. Williams (New Zealand) first place in the long jump.

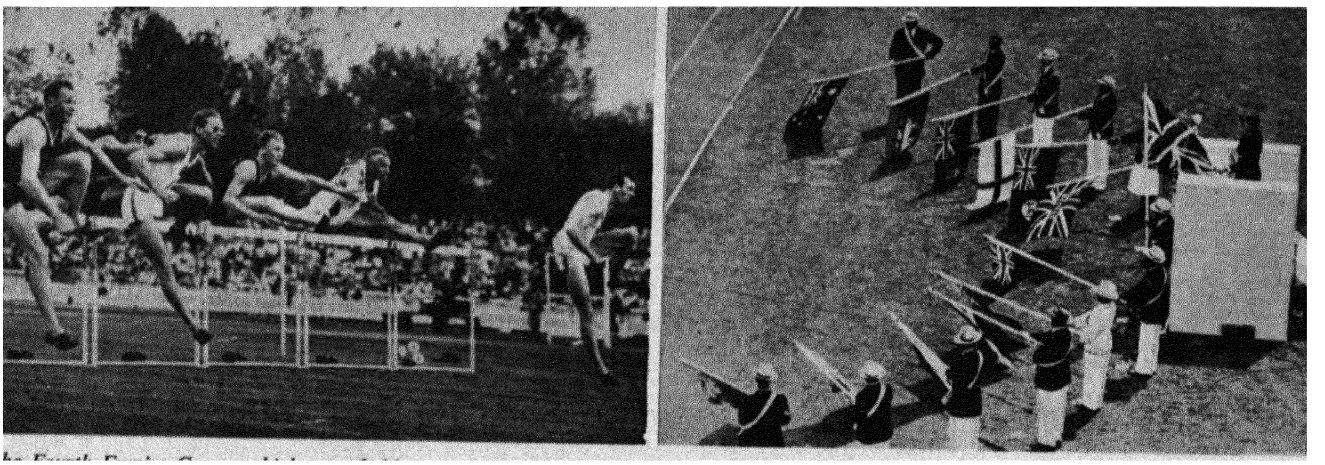
In the swimming events, held in the Newmarket Olympic pool, the standard of performance, particularly by the women, was high; J. C. Harrison, a 14-yr.-old South African girl, made perhaps the greatest impression. Although the shallow fresh-water pool was unsuitable for fast swimming, records were achieved in three men's events and in all six women's events. Miss E. Child (England) scored one of the three double successes of the games in the diving competitions. The Australians took the water polo title with three straight wins over the New Zealanders.

The track cycling events, held at the Western Springs stadium, drew nearly 40,000 people to a single session. The highlight was the 10 mi. championship won, by a tyre, by W. Heseltine (Australia) in the games record time of 23 min. 23·4 sec.; L. P. Lock (New Zealand) was second. R. Mockridge added two further Australian successes by winning both the 1,000 m. spring and the time trial; his time of 1 min. 13·4 sec. in the latter was a record. C. Cartwright (England) prevented Mockridge from securing a third gold medal with a particularly fine win in the 4,000 m. individual pursuit event.

England and Scotland between them won five of the eight



Left, C. MacGibbon (Australia) in the javelin event in which she set up a new Empire Games record of 127 ft. 5½ in. Right, M. Jackson (Australia)—No. 178—winning the 100 yd. event. Her time of 10·8 sec. equalled the world record.



The Fourth Empire Games which were held at Auckland, New Zealand, Feb. 1950. Right, Stan Ley (New Zealand), taking the oath at the opening of the games, and, left, the final of the 220 yd. hurdles.

divisions in the boxing tournament. The South Africans, who did so well at the 1948 Olympic games, won only the bantam-weight and middle-weight divisions. Australia won four of the five rowing titles, a feat rivalled in its completeness only by the English fencing team's record in winning six out of the seven contests.

The Fourth Empire Games, Auckland—Complete List of Winners.

	Athletics (Men)	
100 yd.	J. F. Treloar (Australia)	9·7 sec.
220 yd.	J. F. Treloar (Australia)	21·5 sec.
440 yd.	E. W. Carr (Australia)	47·9 sec.
880 yd.	H. J. Parlett (England)	1 min. 53·1 sec.
One mile	C. W. Parnell (Canada)	4 min. 11 sec.
Three miles	L. Eyre (England)	14 min. 23·6 sec.
Six miles	W. H. Nelson (New Zealand)	30 min. 29·6 sec.
Marathon	J. T. Holden (England)	2 hr. 32 min. 57 sec.
120 yd. hurdles	P. J. Gardner (Australia)	14·3 sec.
440 yd. hurdles	D. White (Ceylon)	52·5 sec.
Pole vault	T. D. Anderson (England)	13 ft. 0⅛ in.
High jump	J. A. Winter (Australia)	6 ft. 6 in.
Long jump	N. G. Price (South Africa)	24 ft.
Hop, step and jump	B. Oliver (Australia)	51 ft. 2¼ in.
Putting the weight	M. Tuicakau (Fiji)	48 ft. 0½ in.
Throwing the hammer	D. McD. Clark (Scotland)	163 ft. 10¼ in.
Throwing the discus	I. M. Reed (Australia)	156 ft. 7 in.
Throwing the javelin	L. J. Roininen (Canada)	187 ft. 4½ in.
440 yd. relay	Australia	42·2 sec.
1 mi. relay	Australia	3 min. 17·8 sec.
	Athletics (Women)	
100 yd.	M. Jackson (Australia)	10·8 sec.
220 yd.	M. Jackson (Australia)	24·3 sec.
80 m. hurdles	S. Strickland (Australia)	11·6 sec.
High jump	D. J. Tyler (England)	5 ft. 3 in.
Long jump	Y. W. Williams (New Zealand)	19 ft. 4⅛ in.
Throwing the javelin	C. MacGibbon (Australia)	127 ft. 5¼ in.
440 yd. relay	Australia	47·9 sec.
660 yd. relay	Australia	1 min. 13·4 sec.
	Bowling	
Singles	J. Pirret (New Zealand)	
Pairs	R. Henry, E. P. Exelby (New Zealand)	
Fours	South Africa	
	Boxing	
Fly-weight	H. Riley (Scotland)	
Bantam-weight	J. C. J. van Rensburg (South Africa)	
Feather-weight	H. Gilliland (Scotland)	
Light-weight	R. Latham (England)	
Welter-weight	T. S. Ratcliffe (England)	
Middle-weight	T. van Schalkwyk (South Africa)	
Light-heavy-weight	D. E. Scott (England)	
Heavy-weight	F. Creagh (New Zealand)	
	Cycling	
1,000 m.	R. Mockridge (Australia)	
4,000 m. pursuit	C. Cartwright (England)	5 min. 16·3 sec.
10 mi.	W. Heseltine (Australia)	23 min. 23·4 sec.
1,000 m. time trial	R. Mockridge (Australia)	1 min. 13·4 sec.
100 km. road race	H. Sutherland (Australia)	3 hr. 13 min. 6·4 sec.

	Fencing	
Foil	R. R. Paul (England)	Team, England
Épée	C. L. de Beaumont (England)	Team, Australia
Sabre	A. G. Pilbrow (England)	Team, England
Women's foil	M. A. Glen-Haig (England)	
	Rowing	
Single sculls	M. T. Wood (Australia)	
Double sculls	M. S. Riley and M. T. Wood (Australia)	
Coxwainless pairs	J. W. Webster and W. J. Lambert (Australia)	
Coxed fours	New Zealand	
Eights	Australia	
	Swimming (Men)	
110 yd. freestyle	P. Salmon (Canada)	1 min. 0·4 sec.
440 yd. freestyle	D. G. Agnew (Australia)	4 min. 49·4 sec.
1,650 yd. freestyle	G. M. Johnston (South Africa)	19 min. 55·7 sec.
110 yd. backstroke	J. C. Wiid (South Africa)	1 min. 7·7 sec.
220 yd. breaststroke	D. Hawkins (Australia)	2 min. 54·1 sec.
880 yd. freestyle relay	New Zealand	9 min. 27·7 sec.
330 yd. medley relay	England	3 min. 26·6 sec.
High diving	P. Heatly (Scotland)	
Springboard diving	G. Athans (Canada)	
Water Polo	Australia	
	Swimming (Women)	
110 yd. freestyle	M. McQuade (Australia)	1 min. 9 sec.
440 yd. freestyle	J. C. Harrison (South Africa)	5 min. 26·4 sec.
110 yd. backstroke	J. J. Davies (Australia)	1 min. 18·6 sec.
220 yd. breaststroke	H. O. Gordon (Scotland)	3 min. 1·7 sec.
440 yd. freestyle relay	Australia	4 min. 44·9 sec.
330 yd. medley relay	Australia	3 min. 53·8 sec.
High diving	E. Child (England)	
Springboard diving	E. Child (England)	
	Weight-lifting	
Bantam-weight	Tho Fook Hung (Malaya)	655 lb.
Feather-weight	Koh Eng Tong (Malaya)	685 lb.
Light-weight	J. Halliday (England)	760 lb.
Middle-weight	G. A. Gratton (Canada)	795 lb.
Light-heavy-weight	J. Varaleau (Canada)	815 lb.
Heavy-weight	R. H. Cleghorn (New Zealand)	900 lb.
	Wrestling	
Fly-weight	B. Harris (Australia)	
Bantam-weight	D. Mudgway (New Zealand)	
Feather-weight	J. C. Armitt (New Zealand)	
Light-weight	R. E. Garrard (Australia)	
Welter-weight	H. Hudson (Canada)	
Middle-weight	M. Vachon (Canada)	
Light-heavy-weight	P. Morton (South Africa)	
Heavy-weight	J. Armstrong (Australia)	

Although the rowing events took place on Lake Karapiro, 95 mi. from Auckland, crowds reaching 35,000 arrived to watch them. England, winners of the eight-oar event in 1930 and 1938, were represented by a composite Leander and Thames Rowing club crew but the effects on the crew of the 12,000-mi. air trip and the sudden change of climate were apparent. The race rapidly developed into a duel between Australia (stroke, A. W. Brown) and New Zealand (stroke, T. C. Engel). The Australians gained a ¾-length advantage at the start, but the young New Zealand crew, who had trained together for seven months, were ahead for most of the way. The issue was decided, however, in the last ten strokes and Australia won by the official margin of one foot.

In the sculls Australia's Olympic champion, M. T. Wood, gave a polished exhibition and beat A. D. Rowe (England) by 2½ lengths. Wood and M. S. Riley won the double sculls and a powerful New Zealand quartet won the coxed fours by two lengths from the Australians.

R. E. Garrard (Australia), light-weight, was the outstanding wrestler of the 27 competitors. This 43-yr.-old athlete retained his title won in London in 1934; it was his 471st victory in first-class bouts. Honours in the other weight-classes were evenly distributed among the four dominion teams. A popular feature of the newly introduced weight-lifting championship was the excellent performance of the small Malayan team, which was making its first appearance in international competition. (N. McW.)

EMPLOYMENT. During 1950 the general trend of employment in western Europe was upward under the influence of the United States' expanded world demand for rearmament and stockpiling. Nevertheless unemployment continued to be severe in certain countries, notably Italy, Western Germany and Belgium; whereas in the United Kingdom and in some other areas the shortage of workers became more acute. For most countries figures were available only up to the middle of the year; but it could be taken that there was no sharp reversal of trends during the later months. Index numbers of employment generally moved upwards or were halted by the absence of more workers who could be absorbed, except through immigration. That made little progress despite the evident co-existence of surplus workers in Italy especially and shortages elsewhere. In the use of the Table I, which shows the movement of the index of employment in those countries for which figures exist, it should be borne in mind that the figures are not on a uniform basis or for a uniform base date. Figures have been added, where available, for the British Dominions.

Unemployment statistics, like those of employment, were compiled on widely different bases in the various countries, and could not be used for direct comparison except in the broadest way, so as to ignore all differences except those of the order of magnitude. The figures were useful mainly for indicating the trend of unemployment in each country rather than the absolute amount. Some covered only members of trade unions, some only insured workers receiving benefits, some only insured workers generally, and some only workers registered as seeking work. None show the total of all who were out of work, though the United Kingdom figures nearly approached this. Seasonal fluctuations were very great in certain countries; *e.g.*, Austria, Canada.

The high level of unemployment in Belgium was a considerable factor in 1950 in retarding the application of the Benelux agreement and was also a factor in the negotiations about coal prices in connection with the Schuman plan. The desire to protect high-cost home industries was also largely responsible for the unwillingness of Italy and France to make further tariff concessions at the Torquay conference of 1950, held in pursuance of the Geneva tariff agreements which had for the time being taken the place of the proposed international trade organization.

TABLE I. EMPLOYMENT IN WESTERN EUROPE AND THE BRITISH DOMINIONS
(Index numbers)

	Base Date	1948	1949	1950 (Jan.-June)	1950 (latest month)
General					
Austria	1937	136·6	137·0	135·0	—
France*	1937	107·7	109·5		—
Western Germany	1948	100	103		106·6 (June)
Norway	1941	106·4	108·7	109·6	111·1 (July)
United Kingdom	1948	100	101·0	101·7	102·0 (July)
Canada*	1937	171·6	172·0	167·8	—
Australia	1939	137·0	140·8	146·0	—
New Zealand	1947	103·1	105		—
Union of South Africa†	1937	128·6	134·1	137·3	
Manufacturing Industries only					
Belgium	1937	120	113	107§	—
France	1937	110·3	112·7		113·4 (Jan.)
Western Germany	1948	100	110·9		115·6 (June)
Holland	1947	109·9	115·3		119·3 (June)
Italy	1947	98·3	97·1	95·3§	
Norway	1948	100	106·2	108·8	109·1 (July)
Sweden	1937	125·5	126·3	126·2	125·5 (July)
Switzerland	1937	135·1	126·6		122·0 (June)
United Kingdom	1948	100	102·2	103·8	103·7 (July)
Canada	1937	179·2	179·4	176·7	—
Australia	1937	159·9	161·7	168·4	—
New Zealand	1947	102·7	105·1‡		—
Union of South Africa:					
(a) general	1937	156·1	160·6	159·4	—
(b) Europeans only	1937	122·8	125·1	123·6	—

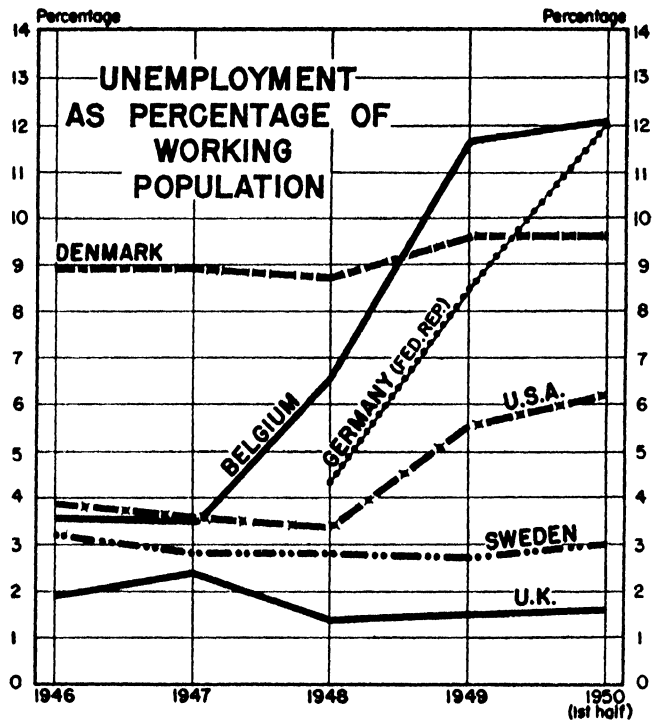
* Excl. agriculture. † Industry and transport only. ‡ To October. § To April.

In the United Kingdom the total working population rose from 23,185,000 in Dec. 1948 and 23,318,000 in Dec. 1949 to 23,406,000 in Aug. 1950. The numbers in the armed forces at the corresponding dates were 808,000, 725,000 and 701,000, this last being an increase of 11,000 over the total for July 1950. The most significant occupational changes included a fall in mining, from 870,000 at the end of 1948 and 853,000 at the end of 1949 to 838,000 in Aug. 1950, and significant increases between Dec. 1949 and Aug. 1950 in textiles (12,000), printing (17,000), the food trades (15,000), distribution (35,000) and professional and financial services (74,000). In most other occupations the changes were relatively small. Labour continued to be scarce, except for local pockets of unemployment; *e.g.*, in shipbuilding. The export drive

TABLE II. INDUSTRIAL UNEMPLOYMENT IN WESTERN EUROPE AND THE BRITISH DOMINIONS

	Totals in thousands (average)			Percentages (average)		
	1949	1950 (Jan.-June)	1950 (latest month)	1949	1950 (1st half)	1950 (latest month)
Austria*	91·2	139·8	89·5‖	4·6	7·0	4·5
Belgium†	234·9	242·0	204·6¶	11·7	12·0	10·2
Denmark‡	59·0	60·0	23·1‖	9·6	9·6	3·6
France*	131·1	170·6	126·8¶			
W. Germany*	1,263·0	1,786·9	1,341 ‖	8·5	11·1	
Holland*	62·3	88·3	60·6¶			
Ireland†	34·9	34·1	25·3¶	9·0	8·7	6·2
Italy*	1,673	1,674				
Norway*	7·7	11·3	2·4¶	1·0	1·4	0·3
Spain*	160·1	164·9				
Sweden‡	26·2	27·1		2·7	2·7	
Switzerland§	8·1	13·5	3·5¶	1·6	2·5	0·7
United Kingdom†	338·0	365·0	312·9‖	1·6	1·7	1·5
Canada†	135·6	219·0	92·5¶	5·3	8·4	3·5
Australia†		2·1		1·9	0·8	
Union of South Africa (Europeans)*	15·1	18·3	16·5¶			

* Registered unemployed. † Insured unemployed. ‡ Trade union members unemployed. § Totals are of wholly unemployed only; percentages are of insured unemployed. ‖ Aug. ¶ July.



tended to absorb more workers. There had not been time in Aug. 1950 for the effects of rearmament to be seriously felt.

The publication of the United Nations experts' *Report on National and International Measures for Full Employment* in Dec. 1949 aroused great interest in Europe, above all in Great Britain; and the subsequent discussions at the Economic and Social council and the replies of governments to the questions addressed to them by the council were followed with eager hopes. Most British economists were in sympathy with the experts' general approach but realized that almost everything depended on the reception of the proposals in the U.S. Very broadly, the committee, which included Professor Maurice Clark of Columbia university, N. Kaldor of Cambridge university, Norman Walker of the Australian Department of External Affairs and Pierre Uri of the French general planning commission proposed that a full employment "target" should be fixed for each country and that governments should pledge themselves to do all in their power to maintain employment at the planned levels, including controlling the levels of private as well as public investment. It proposed measures designed to stabilize the incomes of primary producers and the introduction on an international scale of automatic compensatory measures in the event of any serious outbreak of unemployment due to a fall in international trade. These measures were to take the form principally of the extension of special credits by "surplus" to "deficit" countries in order to correct disequilibria in balances of payments; and the committee also advocated very extensive programmes of international investment for the development of backward areas, including large-scale lending by governments on favourable economic terms.

(G. D. H. C.)

United States. The total labour force in Aug. 1950 numbered 66,204,000, the highest figure reached during the year. This was an increase of slightly more than 1,000,000 persons from the Aug. 1949 figure of 65,105,000. Likewise, the civilian labour force (persons not in the armed forces and available for employment) was larger by 1,230,000 persons, numbering 64,867,000. Coupled with this growth was a decrease in unemployment; the Aug. 1949 total of 3,689,000 unemployed decreased to 2,500,000 in Aug. 1950. In Aug. 1950 there were 44,939,000 employees in non-agricultural establishments,

TABLE III. WORKERS IN NON-AGRICULTURAL ESTABLISHMENTS BY INDUSTRIES, UNITED STATES*
(in thousands)

	Aug. 1950	July 1950	June 1950	Aug. 1949
Total estimated employment	44,939	44,062	43,952	42,994
Mining	962	922	947	956
Contract construction	2,589	2,524	2,416	2,340
Manufacturing	15,385	14,763	14,667	14,114
Transportation and public utilities	4,099	4,058	4,023	3,992
Trade	9,426	9,374	9,414	9,213
Finance	1,837	1,832	1,826	1,780
Service	4,843	4,848	4,827	4,836
Government	5,798	5,741	5,832	5,763

* Proprietors, self-employed persons, domestic servants and part-time personnel of the armed forces excluded.
SOURCE: United States Bureau of Labour Statistics, *Monthly Labour Review*.

TABLE IV. NUMBER OF PRODUCTION WORKERS IN MANUFACTURING, BY INDUSTRIAL GROUPS, UNITED STATES
(est. in thousands)

	Aug. 1950	July 1950	June 1950	Aug. 1949
All manufacturing	15,385	14,763	14,667	14,114
Durable goods	8,282	7,976	7,968	7,302
Non-durable goods	7,103	6,787	6,699	6,812
Ordnance and accessories	24·0	23·2	23·5	22·6
Food and kindred products	1,699	1,616	1,520	1,718
Tobacco manufactures	86	82	82	98
Textile-mill products	1,303	1,248	1,263	1,179
Apparel and other finished textile products	1,192	1,091	1,090	1,155
Lumber and wood products (except furniture)	846	812	804	747
Furniture and fixtures	362	348	349	305
Paper and allied products	480	466	467	436
Printing, publishing and allied	737	738	738	719
Chemicals and allied products	683	669	671	636
Products of petroleum and coal	250	240	239	247
Rubber products	259	247	247	227
Leather and leather products	414	390	382	397
Stone, clay and glass products	531	510	511	480
Primary metal industries	1,260	1,224	1,218	1,092
Fabricated metal products (except ordnance machinery and transportation equip.)	967	925	921	843
Machinery (except electrical)	1,375	1,340	1,342	1,229
Electrical machinery	866	820	809	712
Transportation equipment	1,337	1,301	1,308	1,224
Instruments and other related products	249	243	242	230
Miscellaneous manufacturing industries	465	430	440	417

SOURCE: United States Bureau of Labour Statistics, *Monthly Labour Review*.

TABLE V. INDEXES OF PRODUCTION WORKER EMPLOYMENT AND WEEKLY PAY ROLLS IN MANUFACTURING INDUSTRIES, U.S.
(1939 average = 100)

	Employment	Weekly Pay Roll
1941 (average)	132·8	164·9
1945 "	157·0	293·5
1946 "	147·8	271·1
1947 "	156·2	326·9
1948 "	155·2	351·4
1949 "	141·6	325·3
1950 "	144·7*	343·9†

* First eight months. † First seven months.
SOURCE: United States Bureau of Labour Statistics, *Monthly Labour Review*.

nearly 2,000,000 more than the 42,994,000 employees in Aug. 1949. Every division of non-agricultural employment showed an increase in this period (although some of the changes were negligible) reversing the general decline shown during the preceding year. The greatest changes occurred in manufacturing, contract construction and trade where the increase numbered 1,271,000, 249,000 and 213,000 respectively. The primary metal, fabricated metal products, non-electrical and electrical machinery, and transportation equipment industries were the leading gainers in employment. Among the non-durable goods industries textile-mill products had a substantial increase in employment between Aug. 1949 and Aug. 1950.

The reversal of the 1949 decline in employment and pay rolls was further indicated by the indexes for these two items. For manufacturing industries the employment index averaged 144·7 for the first eight months of 1950 compared with the 1949 value of 141·6. The weekly pay roll index for the same industries rose from 325·3 in 1949 to 343·9 for the first seven months of 1950.

The first figures for Sept. 1950 indicated a continuation in the same direction. Unemployment was at the lowest point in 21 months, numbering 2,300,000, and early September employment was at a record high level for the season, reaching 61,300,000. The decline from the August employment figure was caused by the withdrawal of students from the labour force. The chief influence affecting employment and wage structures was the defence programme which was greatly expanded after the outbreak of war in Korea. By the close of the year there was already in evidence a noticeable tightening of the labour market.

With the automobile plants setting the pace, new wage increases continued through September and early October. Although such gains cut across all industry, the metal-working, textile, petroleum and maritime employees were the main beneficiaries. Many of the new union contracts adopted the General Motors' agreement feature of tying changes in wages to the consumers' price index as determined by the Bureau of Labour Statistics. (*See* also BUSINESS REVIEW.) (P. TA.)

ENDOCRINOLOGY. Much research during 1950 was concentrated on the action of Cortisone, an adrenal cortical hormone, and of the adrenocorticotropic factor of the anterior pituitary gland (ACTH) upon the signs, symptoms and ultimate course of rheumatoid arthritis (*q.v.*) and a number of acute and chronic diseases. Parallel investigations were concerned with the physiological and biochemical bases for the action of these hormones.

Clinical investigations indicated that these hormones affect not the causes of the particular disorders which they alleviate but rather the tissue reaction to the noxious agents. Thus, in rheumatoid arthritis, Cortisone controls the pain, stiffness and swelling of joints; *i.e.*, the phenomena of inflammation. However, the control usually lasts only as long as adequate daily amounts of the substance are given: without them, all the signs and symptoms rapidly return, and the same joints are affected as were originally the seat of disease. In disease states of a transient character (*e.g.*, acute attacks of rheumatic fever or certain allergic states) Cortisone and ACTH seemingly effect a " cure " by shortening the attack. The beneficial clinical effects in disease are probably not the result of gross metabolic actions of these hormones, since alleviation of signs and symptoms can be obtained in most cases without causing significant aberrations of metabolism. Furthermore, experience in certain inflammatory states of the eye and the skin demonstrated that local application of Cortisone has just as beneficial an effect on the lesions as treatment of the whole person.

By experiment with animals it was shown that Cortisone inhibits the inflammatory reaction in tissues with respect to the growth and increase in number of connective tissue cells (fibroblasts) as observed under the microscope and also prevents or limits the local increase in blood flowing through the area, as indicated grossly by redness and increase in local temperature. There was further evidence that the latter effect might be due to a direct involvement of Cortisone in the constrictor mechanism of small blood vessels. Hence, this hormone may operate against the early blood vessel dilatation (hyperaemia) of inflammation and thus minimize the total tissue-reaction. Thus, though Cortisone appeared to relieve an excessive inflammatory condition, it might do harm in conditions where a vigorous inflammatory tissue response was essential for the protection of the total organism. This was demonstrated in rabbits treated first with Cortisone and then given a subcutaneous injection of a virulent culture of streptococci: the treatment abolished the intense local reaction seen in untreated animals, but this abolition permitted the bacteria to invade the general blood stream; whereas the untreated rabbits suffered local damage but survived, the treated ones died of a generalized infection. Parallel experiences with spontaneous infections in man were reported.

Pituitary-Hypothalamic Relationships. It had been known for many years that stimuli from the brain could lead to the release of one or another of the hormones of the anterior pituitary gland. However, since the hypothalamus has little if any direct nerve-connection to the anterior hypophysis, it was not clear how signals were transmitted from brain to gland. Subsequent investigations indicated that neural signals from the brain lead to the elaboration of certain chemical substances in the hypothalamus (resembling adrenaline or acetylcholine or both) which reach the anterior pituitary gland by means of a network of small blood vessels called the pituitary portal system. The transmitting system is, therefore, partly neural and partly humoral.

Many diverse stimuli had been shown to cause release of ACTH from the anterior hypophysis: some may come from the external environment (sudden temperature-changes, physical injury, drugs, etc.); others originate in the body itself (fever, hormonal activities, anxiety-states, etc.). The question arose as to whether all these different stimuli operated through the hypothalamic pathway. During 1950 it became apparent, as crystallized in the review of W. V. McDermott *et al.* (*Yale J. Biol. and Med.*, 23: 52-66, Sept. 1950), that the hypothalamus is by no means the only pathway for the stimulation of ACTH release: for example, when the intimate connection between the pituitary gland and the midbrain was severed by the removal of the gland to the outer chamber of the eye, the injection of histamine was nevertheless followed by evidence of ACTH release; and adrenaline applied topically to the eye containing the pituitary transplant also led to ACTH release. It was therefore necessary to conclude that in some instances the signal can be conveyed directly *via* the bloodstream to the pituitary without the intervention of the nervous system.

It was further shown that, the secretion of adrenaline is not in every case a necessary intermediate step between an internal or external stress and the release of ACTH, since certain stresses can release it in animals from which the adrenal medullae have been previously extirpated.

All these mechanisms, moreover, impinge upon an important regulatory system which depends upon the level of the adrenal cortical hormones in the circulating blood. When the level diminishes, more ACTH is released, which in turn stimulates the adrenal cortex to produce more of its hormones. When the level of adrenal cortical hormones in the blood is increased, the anterior pituitary is inhibited from secreting more ACTH. Under ordinary circumstances, this homoeostatic mechanism serves to preserve a steady state despite continual demands arising from environmental stimuli. The work of 1950 showed that the activity of the important pituitary-adrenal axis can be modified according to " need " through a variety of pathways.

Diabetogenic Influence of Growth Hormone. The administration of crude extracts of the anterior pituitary gland to normal animals was known to induce a severe diabetic state, whereas the extirpation of the pituitary from a depancreatized animal was known to alleviate the severity; and when it was found that certain steroid hormones from the adrenal cortex were also diabetogenic and that the extirpation of the adrenal glands would reduce the severity of experimental

diabetes, it seemed possible that the diabetogenic factor in the anterior pituitary was ACTH. However, the reports of R. C. Debodo, J. A. Russell and others (*Am. J. Physiol.*, 163: 310-318, Nov. 1950, and *Endocrinology*, 47: 114-128, Aug. 1950) indicated that (in addition to ACTH) the growth hormone of the anterior pituitary was a potent diabetogenic factor.

Many seeming paradoxes would have to be resolved before the diabetogenic and anti-insulin activity of growth hormone (GH) was understood. As part of its action in promoting growth, GH speeds up the synthesis of tissue proteins. But this occurs only when insulin is also present: in the absence of insulin GH leads to increased breakdown of protein. When insulin is present, a single injection of GH causes a lowering of the blood sugar-level. On repeated injection, GH causes an increase in the blood sugar-level and results in a state of resistance to the action of administered insulin. The long-continued administration of GH, under the appropriate conditions, leads to a degeneration of the insulin-producing cells of the pancreas and, thus, to the establishment of a permanent form of experimental diabetes.

See "Symposium on Cortisone and ACTH in Clinical Medicine," *Proc. Staff Meet.*, Mayo Clinic, 25: 474-502 (Aug. 9, 1950); "Symposium on present Status of Cortisone and ACTH," *Bull. N. Y. Acad. Med.*, 26: 206-260 (April, 1950). (S. So.; RA. L.)

ENGINEERING: *see* AIRCRAFT MANUFACTURE; BRIDGES; BUILDING AND CONSTRUCTION INDUSTRY; CANALS AND INLAND WATERWAYS; COAL; DOCKS AND HARBOURS; ELECTRICAL INDUSTRIES; ELECTRIC POWER; ELECTRIC TRANSPORT; ELECTRONICS; FLOODS AND FLOOD CONTROL; GAS; HEAVY ENGINEERING; IRON AND STEEL; JET PROPULSION AND GAS TURBINES; LIGHT ENGINEERING; MACHINERY AND MACHINE TOOLS; MOTOR CYCLE AND CYCLE INDUSTRY; MOTOR INDUSTRY; RADIO, SCIENTIFIC DEVELOPMENTS IN; RAILWAYS; ROADS; SEWERAGE; SHIPBUILDING; TELEGRAPHY; TELEPHONE; TELEVISION; TEXTILE INDUSTRY; TUNNELS; WATER SUPPLY.

ENGLAND: *see* GREAT BRITAIN AND NORTHERN IRELAND, UNITED KINGDOM OF.

ENGLISH LITERATURE. If in 1950 the stresses of an uneasy peace sometimes slowed the fluctuations of the imaginative impulse, they were not allowed to overcast completely the vigour and variety of English writings and opinions. Embedded in an output of some thousands of volumes, the jewels had to be dug for; but how richly satisfying, for example, was the discovery of Freya Stark's *Traveller's Prelude*. Here, with an acute feeling for words and images, was a sensitively-woven narrative of her life—exhilarations and sadnesses, enthusiasms and frictions—up to the time when her travels in the east began. Here, too, was a marked individuality—a characteristic not lacking in the autobiographical field.

For instance, in his *Independent Member* Sir Alan Herbert ruminated in spirited and witty fashion on his former career as an M.P. for Oxford university, the ways of parliament and his love of London's river; while another outspoken individualist, Sir Alfred Munnings, the former president of the Royal Academy, perhaps less happy in another branch of art, was content to confine his account of *An Artist's Life* to his first 40 years, recalling his youth in East Anglia and his early struggles as a painter. Wyndham Lewis's *Rude Assignment* was not so much concerned with personal experiences as with his work as writer and artist. Memorable portraits of painters, writers and musicians of the years between the wars—Walter Richard Sickert, Edmund Gosse, W. H. Davies and Arnold Bennett among them—formed the substance of *Noble Essences*, the fifth and final volume of Sir Osbert Sitwell's autobiographical series. In *The Crest on the Silver* Geoffrey Grigson was happier dealing with his childhood and family background than with the more recent phases of his career; and Neville Cardus's *Second Innings* was very much in the manner of his first venture into reminiscence—with cricket, music and the theatre taking pride of place. The third volume of Herbert Hensley Henson's *Retrospect of an Unimportant Life* was concerned with the years of retirement, from 1939 to 1946, and included his revealing "Open Letter to a Young Padre"; while Sir Arthur Keith, who had his own declared views on man's origin and destiny, produced a detailed *Autobiography* engaging in its frankness.

Among the biographers Mrs. Cecil Woodham-Smith found an ideal subject in *Florence Nightingale*. Authoritative, careful in its marshalling of facts and skilfully and sympathetically written, this study kept in proper perspective the diverse phases in the life of a truly extraordinary woman. Among the men who wanted to marry Florence Nightingale was Richard Monckton Milnes, later Lord Houghton. After her refusal, he wedded a daughter of Lord Crewe and devoted himself to the patronage of promising writers and to conducting his celebrated breakfasts, which called from Thomas Carlyle, when he was asked what he thought would be the first thing to happen if Christ came to earth again, the comment: "Monckton Milnes would ask him to breakfast." The first volume of an understanding life of *Monckton Milnes*, written by James Pope-Hennessy and based on Milnes's own papers, dealt with his life from 1809-51. Victorian life from the woman's viewpoint and glimpses of the industrial activities of the time were seen in a collection of extracts from a journal kept between 1833 and 1852 by Lady Charlotte Guest, wife of the famous ironmaster John Guest. Lady Charlotte's grandson, Lord Bessborough, edited the volume. Mrs. Arbuthnot, the intimate friend of the Duke of Wellington, also kept a journal, which left off when Lady Charlotte's began. This *Journal of Mrs. Arbuthnot, 1820-1832*, edited by Francis Bamford and the seventh Duke of Wellington, offered some illuminating comments on the politics and personalities of the period and made possible a better understanding of Wellington's character. The duke's victory at Waterloo provided one of the best chapters in Arthur Bryant's *The Age of Elegance 1812-1832*, the third and final volume of his trilogy depicting the struggle against the French Revolution and Napoleon, and the state of Britain over a period of 30 years.

The still-rich quarries of the 18th century were again worked over to some purpose and yielded *Boswell's London Journal*, a racy and uninhibited record of his stay in the city from the time he left Scotland on Nov. 15, 1762, to his departure for Utrecht in August of the following year. This was the first of a series of volumes to come from the latterly discovered haul of Boswell papers now kept in Yale university. Correspondence and documents which came to light only some 20 years before enabled Lord Herbert to issue *The Pembroke Papers, 1780-1794*, a further selection of extracts from the letters and diaries of the tenth Lord Pembroke and his circle, in which that plain-spoken noble lord vigorously and forcefully expressed himself on family matters and 18th-century activities; and Lord Ilchester in *Lord Hervey and His Friends, 1726-1738* included many of that chronicler's letters to the brothers Fox, afterwards Lords Ilchester and Holland. Stuart Piggott's biography of *William Stukeley* dwelt more on the serious achievements of that 18th-century antiquary than with his better-known amiable eccentricities; and Bernard Martin's *John Newton* agreeably reconstructed the life and times of the one-time sailor, slave-trader, preacher and hymn writer.

British history through the centuries was surveyed by

Professor Keith Feiling's 1,600-page *History of England;* while in *A History of the English People* R. J. Mitchell and M. D. R. Leys, who were concerned with describing the ordinary life of the ordinary Englishman as revealed by himself, concentrated mainly on social history from the Norman conquest onwards. The structure of society in *The England of Elizabeth* was examined in the first volume of A. L. Rowse's new portrait of the Elizabethan age; and an account of the last days of mediaeval monasticism in western Europe, published posthumously, brought to a conclusion G. G. Coulton's learned four-volume study of *Five Centuries of Religion.*

Professor Nichol Smith's *John Dryden* was concerned with the poet's early verse and criticisms, his plays, satires and religious poems, translations, odes and fables; and Dryden's prose and poetry were also estimated by C. V. Wedgwood in an excellent short survey of *Seventeenth Century English Literature.* Two literary centenaries—the death of William Wordsworth and the birth of Robert Louis Stevenson—were celebrated with a goodly muster of books about the central figure and reprints of his works. Among the Wordsworthians Helen Darbishire's *The Poet Wordsworth* was the most satisfying appraisement; and Janet Adam Smith's scholarly edition of Stevenson's *Collected Poems* was in every way a tribute worthy of its occasion.

Aldous Huxley, Bertrand Russell (*q.v.*), George Orwell (*see* OBITUARIES) and Edward Sackville-West produced varied and thought-provoking groups of essays. The main paper in Huxley's *Themes and Variations* was devoted to the 19th-century French philosopher Maine de Biran, but there were others on the baroque, El Greco and Piranesi, as well as on over-population and soil erosion. Bertrand Russell, winner of a Nobel Prize for Literature, called his reflections on politics, philosophy and other matters *Unpopular Essays.* Political and literary themes provided the substance of Orwell's posthumous volume, *Shooting an Elephant*, though it also contained some light-weight pieces of journalism. *Inclinations*, a collection of literary studies, European as well as English, reflected E. Sackville-West's critical acumen and the wide range of his interests.

Richard Aldington's able biography of D. H. Lawrence *Portrait of a Genius But . . .* considered that writer's novels, poems and other works as well as his life; and *The Letters of William Morris* to his family and friends, collected by Philip Henderson contained some that had not before been published.

Among the war books that stood on their own merits as pieces of writing were Winston Churchill's third volume of war memoirs, *The Grand Alliance*, which surveyed the year 1941; *Private Army*, Vladimir Peniakoff's account of the small independent unit he commanded so successfully in Africa and Europe, usually behind the enemy lines; and *The Fuel of the Fire* by Douglas Grant, who in revealing what took place in one man's mind during his experience of war showed himself the possessor of a sensitive intelligence and imagination and a style of writing out of the ordinary. (A. CK.)

Fiction. In 1950 the spate of fiction continued to flow ceaselessly into the libraries and book-shops. A literary event of the year was the publication of Rose Macaulay's first novel for a decade; but *The World my Wilderness* disappointed her admirers. The refreshing intelligence of Miss Macaulay's mind could not disguise a sense of contrivance nor bring to life an unconvincing cast. In contrast William Cooper's *Scenes from Provincial Life* was artlessly true to experience. His touch was lightly satiric, his characters credible though grubby, in a sly tale of love among the moderns. In another vein of satire Henry Green's *Nothing* was a chronicle of decadence. It could be counted a loss that a novelist of Green's calibre chose wholly to people his stage with cynical hedonists, who were witty if nasty, and their youngers and betters, who were nicer but rather dull.

Many so-called novels were more accurately high-grade thrillers, or largely—in the film phrase—" documentaries," or something of both. Typical of these were Mary Borden's *For the Record*, Robert Westerby's *An Awful Lot of Coffee* and Victor Canning's *A Forest of Eyes.* Also in 1950 it again was the fashion for writers to go slumming. (The psychological novelists did so too, visiting forlorn places of the heart and the darker corners of the mind.) They saw man groping, almost on all fours, in the murk of urban landscapes—but failed to visualize him erect against a background of eternity. Dennis Parry's *Fair House of Joy*, a supremely well-told tale of a doomed infatuation, attained pathos if not tragedy. Royston Morley in *The Desert in the Bed* dealt earnestly, if humourlessly, with the problem of the writer in society. Denton Welch's posthumous *A Voice through a Cloud* was a sensitive and evocative autobiographical record of suffering. Like so much published in 1950 it was rather a direct transcript of experience than a work of creative imagination.

There was nothing during the year to equal the two finest novels of 1948; Robert Liddell's *The Last Enchantments* and Graham Greene's *The Heart of the Matter.* Liddell kept us waiting. Greene only gave us, in book form, the film scripts of *The Third Man* and *The Fallen Idol.* His catholic *confrère* Evelyn Waugh, no longer historian of the decline and fall of Bright Young Things, wrote in *Helena* a life of the saint who was the mother of Constantine the Great and the reputed discoverer of the relics of the Cross. Waugh's prose style was the wrong instrument for this task and the effect of modern slang in the mouths of Romans and early Christians was, as when Naomi Mitchison tried the same thing, irritatingly whimsical. Margaret Kennedy, creator of *The Constant Nymph*, wrote a best-seller that was also a better book. Her novel *The Feast* was a modern morality based on the seven deadly sins. In the same class Douglas Reed, author of *Insanity Fair* and other popular polemics on world affairs, surprised us with *Rule of Three*, a Conradesque thriller dealing with sex and suspense on the high seas. It was, like all this author's works, a curious mixture of naïvety and wisdom. The most distinguished work by a Catholic novelist was Bruce Marshall's *Every Man a Penny*, a memorable study in humility that showed deep understanding of the mind and soul of France. Marshall's cardinals at play recalled, perhaps intentionally, the Homeric gods in the *Iliad.* A late arrival that should be noted was Walter Allen's *Dead Man over All.*

In 1950 fewer writers offered, as short stories, fragmentary sketches and samples of " work in progress." P. G. Wodehouse's *Nothing Serious* proved him to be still a great and unique humorist. In *Mr. Midshipman Hornblower* C. S. Forester—one of the finest British fictional craftsmen—recounted early episodes in the life of his Nelsonian hero. William Sansom's tales in *The Passionate North* were slight, well-written, born of a sense of place. Angus Wilson's *Such Darling Dodos*, a portrait gallery of failures, confirmed his reputation as one of the best British writers of short stories. H. E. Bates's *Dear Life* was a bleak *conte* based on the true case of a young Welsh girl and a G.I. deserter who teamed up for crime. Bates achieved sympathetic insight into the mind of his clueless heroine. Her tough, unmoral lover was of the lost tribe of Harry Lime in Graham Greene's *The Third Man.*

In the course of 1950 the amount of talent shown by established and younger writers was impressive. Significantly perhaps there was much satire, often bleak if witty, but sometimes gay. Aubrey Menen's *The Backward Bride*, for instance, shone the light of her innocence into existentialist and other dark places. But case-histories of schizophrenics continued to appear and the accent, on the whole,

was on misery. Of course writers must describe their world as they see it and they cannot be blamed for getting caught up in their contemporary situation—nor for attempting to improve it. Only two qualifications need be added. The true end of the novel is illumination, rather than criticism, of life. And great literature not only anatomizes but transcends its time. (L. PA.)

Poetry. The year 1950 is likely to be remembered as one in which two poets achieved remarkable success in the theatre. Both in London and in New York T. S. Eliot's *The Cocktail Party* was received with a paean of praise; and a second paean no less loud was raised for the work of Christopher Fry (*q.v.*). Dramatic critics did not quite make up their minds whether Eliot's and Fry's plays were really plays or dramatic poems. In reading *The Cocktail Party* or *Venus Observed* one is struck by the difference of style between the two poets: Eliot relies on subtlety of rhythm to carry his lines which are in simple unadorned colloquial language; Fry, upon a fantastic extravagance of artificial language which it yet remains possible to speak naturally. It says much for the vitality of poetry and the drama that two artists of such entirely opposite styles should be so successful.

The year also saw the re-issue of the full *Collected Poems* of W. B. Yeats, which had been unobtainable for nearly ten years. Meanwhile much criticism had been expended on him, and it was well that a new generation was now able to discover for itself the manifold genius of the greatest poet of the first half of the 20th century. Yeat's poetic life spanned nearly 50 years, and for many the work of his old age is the finest of all. Another poet of genius, not greatly his junior, was Walter de la Mare, still happily alive in 1950; and he too in old age was writing poetry of a new power, concentration and tranquillity. His latest collection *The Inward Companion* contained at least half a dozen poems which would rank among the finest he had written. But the year was not only notable for the enhancement of reputations already beyond question. Among the younger poets George Barker had always been a poet of exciting promise, of *tour-de-force* success and moments of disastrous bathos. He had experimented violently with words and rhythms but his lyrical gift had seldom deserted him. His *News of the World* showed a definite advance; promise became fulfilment. The poet had simplified his style, rhetorical extravagance had given place to a more sensuous, obviously lyrical approach, yet without loss of power, and poems of lasting quality were the result.

Among other works Roy Campbell's *Collected Poems* showed what an outstanding contribution he had made to the literature of the second quarter of the 20th century, as did W. H. Auden's *Collected Poems*—though in his case this was to be regarded as an interim " collected " volume; there was expected to be much to add subsequently. In a time of restricted newsprint and advertisement, many books of poems appeared so unobtrusively that the public hardly knew of their existence. Of these Robert Gittings' *Wentworth Place* was a work of remarkable and sustained quality. Other memorable works were *Underworlds* by Francis Scarfe; *The Swarming of the Bees* by John Heath-Stubbs; and *The Mongrel and other Poems* by Ronald Duncan. Ezra Pound published a further *Seventy Cantos* of his immense and ambitious work without, as it were, adding very much to it. (P. DN.)

ENGRAVING: *see* DRAWING AND ENGRAVING.

ENTEZAM, NASROLLAH, Persian diplomat (b. Tehran, 1900). He graduated in law at the Universities of Tehran and Paris and began his career in the Ministry of Foreign Affairs in 1918. Between 1926 and 1929 he was secretary to the Persian legations in Paris, Warsaw and London. He represented his country at the World Economic conference in London in 1933. From 1934 to 1938 he was *chargé d'affaires* at Berne. On his return to Persia he became director of the political department of the Ministry of Foreign Affairs. In 1942 he was appointed grand master of ceremonies at the Shah's palace and the following year became minister of health. Subsequently he held office as minister of posts and telegraphs, minister of transport and, in 1944-45, minister of foreign affairs. Entezam represented Persia at the San Francisco conference in 1945 and from 1947 was permanent Persian representative to the United Nations. On Sept. 19, 1950, he was elected president of the U.N. general assembly by 32 votes of the 59 valid ballots.

ENTOMOLOGY. Photoperiodic Response in an Insect. Many insects enter a condition of quiescence or " diapause " when their rate of metabolism falls and development or activity ceases. This state, which may supervene in the egg, the larva, the pupa or the imago, depending on the species, is an essential device for adjusting the life cycle to the seasons; by this means the insect readily survives cold or dry conditions and times of food scarcity. In some insects diapause occurs in each generation irrespective of the external conditions. In others, however, the onset of diapause is influenced by such agencies as the quality or quantity of food, the temperature and, as was demonstrated in 1950, the day length.

It had been known for many years that the times of flowering in plants, as well as the reproductive cycles of many mammals and birds, are governed in large measure by the length of successive light and dark periods to which the plants or animals are exposed. R. C. Dickson of the Citrus Experiment station, California, published the first detailed account of the relations between diapause and light in an insect. The oriental fruit moth, *Grapholitha molesta*, an important pest of the peach, passes through from two to seven generations annually in the United States and enters diapause as the fully grown larva. This is primarily a response to the photoperiod. Few diapausing larvae were produced experimentally when the growing insects were exposed to a daily photoperiod of 14 hr. or longer, while with 13 or 12 hr. of light diapause was almost complete. The blue-green region of the spectrum was most effective in inducing diapause, remarkably low light intensities (about three foot-candles) being required. These observations explained how the timing of the life cycle is controlled in nature. During the long days of spring and summer, breeding is continuous; diapause supervenes in response to the shortening days of late summer, even though temperatures may be high and sufficient food is still available for the insects.

Wind Dispersal of Insects. C. G. Johnson emphasized that insect flight is by no means the local phenomenon it was sometimes thought to be. After taking to flight, small buoyant species tend to be caught up by the wind and are sometimes transported passively for hundreds of miles. Many important pests are distributed in this manner, for example, the gypsy moth and the beet leafhopper in the United States. The numbers of insects involved is surprising; thus it was estimated that during the summer months in England a column of air one mile square between the heights of 1,000 and 2,000 ft. would contain approximately 250,000 insects; and the figure might reach 25 million above regions supporting a more luxuriant vegetation.

The composition of this aerial fauna was studied at Rothamsted and Cardington. For sampling the population tow-nets were flown at various heights from the cables of barrage balloons. Few large insects were captured above 1,000 ft.; whereas the zone extending from 1,000 ft. upwards contained the bulk of the true " aerial plankton," consisting

of such small, weakly-flying insects as aphids, thrips and minute flies. Because of their importance in disseminating virus diseases, attention was concentrated principally on the aphids, their diurnal and seasonal peaks of abundance, etc. These investigations, which touched both ecology and meteorology, were expected to lead to a better understanding of aphid dispersal.

Odour Trails in Ants. The possible " signposts " which guide foraging ants back to their nests have interested generations of naturalists. In the brown European ant *Acanthomyops fuliginosus* long columns of workers are found passing to and fro between nest and food. The worker ants are known to be following an odour trail which they perceive with the aid of antennal sense organs. However, the precise form of the odour trail was doubtful, some authors holding that the shape of the scented areas could indicate direction like a human footprint. A new method of " developing " the hitherto invisible trail showed that it consisted of a series of dashes produced by the exudation of droplets of anal secretion which are then drawn out as the ant runs off. These segments of the trail, however, although asymmetrical, are not apparently direction indicators. Ants which first strike the trail some distance away from the nest often become confused and return thence instead of proceeding to the food. Other species, for example the common black garden ant *A. niger*, were found to depend solely on visual landmarks for orientation; there was no odour trail and the ants there-therefore did not run in columns.

The Sensory Perceptions of Insects. The eggs of the sheep blowfly *Lucilia sericata* are usually laid in carcases in which the larvae develop harmlessly; but the flies also lay eggs on the living sheep. Myiasis following sheep " strike " caused serious economic losses in England, Australia and elsewhere. The problem was whether this transference from the dead to the living host indicated a change in the habits of the fly. Investigators agreed that the blowfly was attracted to its oviposition site by odour. Certain organic sulphur compounds, which might be expected to occur in carcases or in the living fleece as decomposition products, were shown to be powerful attractants; but the attracted flies refused to lay eggs except in the presence of a suitable concentration of carbon dioxide and hydrogen sulphide (also normal constituents of the fleece atmosphere). Under field conditions the situation was still more complex, for eggs laid in the fleece failed to hatch unless the atmosphere was humid. *Lucilia* was common in Denmark yet there was no myiasis. It was unlikely, however, that the Danish flies belonged to a distinct " physiological race," as had sometimes been suggested. Subtle climatic differences, which in turn influenced the fleece atmosphere, might be responsible.

Other researches dealing with the senses of insects included studies on: the sensitivity to chemical stimulation of the blowfly tarsal organs; colour vision in hover flies (Syrphidae); sound perception and the role of the tympanal organs in certain night-flying moths; the proprioceptive mechanisms which enable dragonflies to maintain their equilibrium during flight.

The Life History of the Buffalo Gnats. Although often vicious blood feeders, some African and South American species of *Simulium* have an additional significance as transmitters of *Onchocerca*, a filarial nematode which often causes blindness in man. The larvae of most species attach themselves to submerged rocks in rapidly flowing streams. A promising means of control consists in dosing the stream with D.D.T. emulsions. However, before embarking on control measures, their precise distribution must be mapped. In the case of *S. neavei*, a vector of onchocerciasis in Kenya, the immature stages were unknown until V. D. van Someren not the stream bed but the carapace of certain freshwater crabs. Another species attached itself to a mayfly larva, and the relationship between them was intrinsically of great biological interest, as the life histories of *Simulium* and its mayfly host showed considerable mutual adjustment, both insects pupating and then emerging almost at the same moment.

D.D.T.-resistant Houseflies. The sudden appearance of strains of insects resistant to insecticides is only too familiar to the economic entomologist. Examples were afforded by the resistant strains of houseflies reported from Sweden, Italy, Greece and the United States, following the widespread use of D.D.T. fly sprays in these countries. This result was duplicated in the laboratory by breeding from flies that had survived D.D.T. treatment. In this way resistant flies could be produced in a very few generations and these were often resistant to other insecticides as well, suggesting that a " stronger " strain had been selected. The physiological basis of resistance also attracted considerable interest. As the differences between the strains persisted if D.D.T. was injected into the body cavity, the properties of the cuticle did not seem to be involved. Some authors suggested that D.D.T. might exert its action as a nerve poison by destroying the cholinesterases — enzymes playing an essential role in the transmission of nervous impulses. Others held that D.D.T. was more rapidly broken down and metabolized by the resistant flies.

Chemical and Biological Control of Insect Pests. An increased resistance to insecticides is only one of the evils attending the use of chemicals to control pests. A more serious effect is often the unbalance in the insect population which results from the extermination of beneficial parasites and predators. In addressing the 1950 British Association meeting in Birmingham V. B. Wigglesworth emphasized the pressing need for research into biological control methods; the aim of such methods should be to alter the environment just sufficiently to render it unsuitable for the insect. An excellent example could be found in the work of K. R. S. Morris who showed that sleeping sickness in the Gold Coast could be reduced by 98% merely by removing from the riverine habitat of *Glossina tachinoides* and *G. palpalis* certain species of evergreen shrubs and trees which provided the only dry season retreat for the flies.

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ENVOYS: *see* AMBASSADORS AND ENVOYS.

EPIDEMICS. The World Health organization in 1950 was carrying on epidemiological information-services such as were formerly rendered by the Office International d'Hygiène Publique in Paris, by the League of Nations Health department in Geneva and by U.N.R.R.A. It received epidemio-

co-ordinated it; and then redistributed it by a daily broadcast from Geneva, Singapore and Washington and by a weekly record sent out by air mail to all health departments of governments and to other interested organizations. It would also call attention to any circumstances that suggested the early stages of an epidemic of infectious disease in any locality.

Reports received by the W.H.O. in 1950 indicated that plague occurred in southeast Asia and South America but that cases tended to be sporadic and few in number, with the exception of a seasonal outbreak in India. The seasonal increase in one locality of Central India rose during March to a peak of 3,400 cases with 417 deaths.

Cholera was also confined to southeast Asia. A particularly severe epidemic in Calcutta in April reached a peak of 777 cases in one week with 480 deaths.

Yellow fever was quiescent. Only one severe outbreak was reported in the isolated Azero province of Bolivia, where 850 cases with 230 deaths were reported during March. An intensive vaccination programme was instituted.

Smallpox remained the most widely spread of the pestilential diseases. It was reported constantly in most tropical and sub-tropical countries, whence cases found their way to other parts of the world. This was due to the comparatively long incubation period, which permitted travellers to cover considerable distances, particularly by air, before symptoms of the disease occurred. Constant vigilance on the part of all doctors together with efficient public health services were needed to prevent the forming of new centres of infection. Most eastern ports reported the presence of indigenous smallpox infection during 1950.

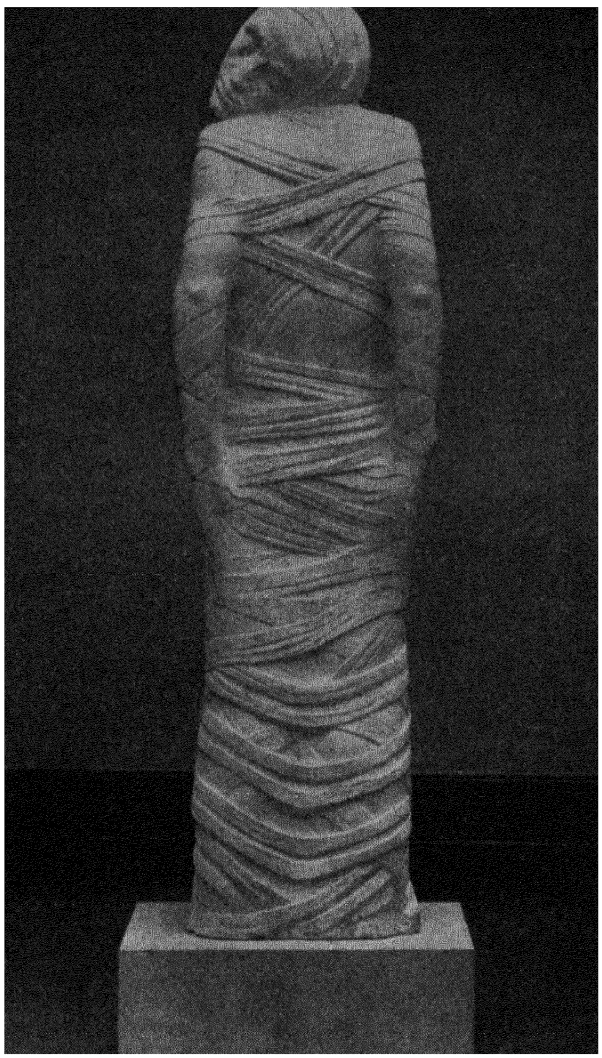
Typhus occurred sporadically in countries where it was still endemic, but the numbers were small. The only outbreak of interest was reported from Japan, where there were 731 cases in Tokyo and Yokohama between January and April, with 42 deaths. The new antibiotic, aureomycin, was used with excellent results in reducing the mortality-rate.

Epidemics of influenza were reported from U.S. and Japan in the early spring but, although widespread, the disease was mild in character. Strain A was reported to be involved in the U.S. outbreak, strains A and B in the Japanese. A mild outbreak was also reported in Nyasaland.

Poliomyelitis in Australia in 1950 was reported to have reached a higher incidence than in the past 25 years (excepting the 1937-38 season).

The year 1950 could therefore be considered satisfactory from the epidemiological point of view. There were no severe epidemics to be compared with the cholera in Egypt in 1947. A serious international effort to eradicate the endemic centres of pestilential disease was being made through the medium of the W.H.O. (*See* also BACTERIOLOGY; ENTOMOLOGY). (R. H. B.)

EPSTEIN, JACOB, British sculptor (b. New York, Nov. 10, 1880), the son of Polish-Jewish parents, worked in a bronze factory while learning modelling from the U.S. sculptor George Grey Barnard. In 1902 he went to the École des Beaux-Arts, Paris; later he moved to Julian's academy. Parisian sculpture was then dominated by Auguste Rodin, but Epstein spent much time studying the antique at the Louvre. He settled in England in 1905, and in 1907-8 made statues for the British Medical association building, Strand, London, which immediately provoked a storm of controversy over their alleged indecency. Their existence was again threatened in 1935 after sharp exchanges of opinion involving the resignation of Walter Richard Sickert from the Royal Academy; the figures were finally demolished in 1937 as "unsafe." During 1912 Epstein returned to Paris to execute the tomb of Oscar Wilde; here he met the sculptor Constantin



Jacob Epstein's "Lazarus" in Hoptonwood stone which was exhibited in 1950 at the Leicester Galleries, London.

Brancusi and the painter Amedeo Modigliani. The tomb at once incurred official displeasure and was destroyed in 1914. Explosions of partisanship attended the appearance of most of Epstein's monumental works, which included the memorial ("Rima") to the naturalist William Henry Hudson in Hyde Park (1925); the figures on the London Transport building, Westminster (1929); "Genesis" (1931) and "Adam" (1938-39). Epstein's monumental style derived partly from primitive carving—of which he made a comprehensive collection—though early work, such as the "Rock Drill" (1913), was Vorticist in character. His portrait bronzes—contrasting sharply in style with his stone carving—were widely acclaimed and included heads of Albert Einstein (1933) and George Bernard Shaw (1934). He also occasionally exhibited paintings and in 1938 made drawings for Charles Baudelaire's *Fleurs du Mal.* In the same year he was made an LL.D. of Aberdeen university. In 1940 he published his autobiography *Let There be Sculpture.* In 1950 he exhibited a massive figure of "Lazarus" at the Leicester galleries, London and made a large male figure in bronze, "Youth Advances," for the Festival of Britain 1951.

ERIKSEN, ERIK, Danish statesman (b. Brangstrup, island of Fyn, Denmark, Nov. 20, 1902), a manager and proprietor of his own ancestral farm, was educated at an agricultural college. From 1927 he took an active part in the

Liberal (Agrarian or *Venstre*) party's youth organization and was national chairman from 1929-32. He was elected a member of the Folketing (Lower Chamber) in 1935 and was afterwards repeatedly re-elected. In 1941 he was elected deputy speaker. In May 1945 he joined the Buhl coalition cabinet as minister of agriculture and fisheries and retained this portfolio in the Kristensen Liberal cabinet (Nov. 1945-Nov. 1947). When the Socialist Hedtoft cabinet was in power (Nov. 1947-Oct. 1950) Eriksen led the Liberal opposition in the Folketing. Shortly after the elections of Sept. 5, 1950, he formed a Liberal-Conservative coalition cabinet which was approved by the king on Oct. 28.

ERITREA. Former Italian colony of east Africa situated on the Red sea between Ethiopia (south) and the Anglo-Egyptian Sudan (west). From 1941 it was under temporary British administration pending a decision on its future. Area (British official est.): 48,350 sq.mi. Pop.: (no census ever taken, 1937 est.) 702,000; (1949 est.) 1,086,300 including 21,432 Italians. The inhabitants in the northwestern part of Eritrea are akin to the Beni Amir of the Sudan and in the central plateau to the Amhara of Ethiopia. Language: mainly Tigrinya and Tigré. Religion: roughly half Christian (Coptic rite) and half Moslem. Capital, Asmara (pop., 1949 est., 117,000 including 17,000 Italians) British chief administrator, Greville Drew.

History. In Oct. 1949 the general assembly of the United Nations passed the problem of Eritrea to a commission comprising the representatives of five nations with instructions to examine the question on the spot and recommend a solution. Its visit to Eritrea stirred up political passions and was marred by acts of brigandage and political terrorism, and racial riots in Asmara, in which many were killed and wounded. The gangs of armed bandits (*shifta*), although chased and harried by security forces, remained active and a menace to peace during the year. The commission failed to agree upon either a solution or the facts, and their report, presented in June, revealed the same distinct cleavage of opinion which had previously bedevilled the problem. Three of the five members advocated some form of union with Ethiopia: two were in favour of a federation and one recommended incorporation. The other two recommended independence after a period of ten years' trusteeship. Discussion in the little assembly produced no answer to the question. When the general assembly met at Lake Success in October, there was by then a marked appreciation of the danger of delay and of the need for an urgent compromise solution. A form of federation between Ethiopia and Eritrea, under the sovereignty of the Ethiopian crown, with a wide measure of autonomy for the Eritrean people and safeguards for the Italian community, was proposed. The federation was to become effective, with the help of a U.N. commissioner, by Sept. 15, 1952. It was accepted by both Italy and Ethiopia and received the support of many Latin American republics which had championed Italy's interests. It was adopted by an overwhelming majority of the general assembly in December. The solution did not fully satisfy the desires of any political faction, but it went a long way to meet them and earned a favourable reception in the country. The solution had the pleasing result of bringing about a reconciliation between Ethopia and Italy and ending their long enmity. (F. E. S.)



Police armed with rifles during disturbances which broke out in Asmara, Eritrea, in Feb. 1950.

Economy. Budget (1948-49, actual): revenue £2,188,939; expenditure £2,257,600. Foreign trade (£ '000, 1948; 1949 in brackets): import 3,017 (3,114·3); export 1,869 (2,261·9). Roads (1949): 780 mi. Railways (1949): 228 mi. Ships entered at Massawa (1949): 792,761 N.R.T.

ESTONIA. From Feb. 24, 1918, to Aug. 6, 1940, when it was annexed by the U.S.S.R., Estonia was an independent republic. The British, U.S. and other governments, however, did not recognize the annexation. Area: 18,357 sq.mi. Pop.: (1939 est.) 1,134,000; (1950 est.) 1,200,000. Nationalities: (1939 est.) Estonian 88·2%, Russian 8·5%, German 1·5%, others 1·8%. Religion: (1939 est.) Lutheran 78·2%, Greek Orthodox 19%, others 2·8%. Chief towns: (pop., 1939 est.) Tallinn (cap., 146,400), Tartu (60,100). Chairman of the presidium of the Supreme Soviet of the Estonian S.S.R., August M. Jakobson; chairman of the council of ministers, Arnold T. Veimer.

History. The tenth anniversary of what was described as the proclamation of Soviet power in Estonia was celebrated with typical propagandist fervour. The most remarkable and inherently tragic change which occured in Estonia during the decade was the decrease in the number of Estonians living in the country from 998,000 to 684,000 according to independent estimates. If the official estimate of total population were true, it would be necessary to assume that the russification of Estonia by the purely physical methods of mass deportation of Estonians and their replacement by Russians was already well advanced. *Sovietskaya Estonia*, a Tallinn Russian-language daily newspaper, had already the largest circulation in the republic. Arnold Raud, minister of education, recommended all teachers and professors to learn Russian so that it might become to an increasing extent the language of instruction. Applying the Stalin view of philology to local conditions, *Rahva Hääl*, organ of the Estonian Communist party, in October attacked teachers and writers guilty of treating the Russian language "contemptuously" by using derivatives from the Finnish language. The infiltration of Russian words into the Estonian language was an obvious conclusion.

A purge of the Estonian Communist party, supervised by Panteleymon K. Ponomarenko, secretary of the central committee of the All-Union Communist party, took place in March and April. Edvard N. Päll, chairman of the presidium of the Supreme Soviet, accused of "bourgeois nationalist deviation," was replaced by August M. Jakobson, a novelist twice awarded the Stalin prize. Hans Kruus, foreign minister, Aleksander Jõeäär, minister of justice, and Major General Boris G. Kumm, minister of state security, were dismissed for the same reason. Kumm's successor was a Russian, Major General Valentin I. Moskalenko. Another victim of the purge, Nikolay G. Karotamm, first secretary of the Estonian Communist party, was succeeded by a russified

Estonian Ivan G. Käbin. After the latest "verification" of the party the number of members was estimated at 4,000 and that of candidates at 2,800. On Oct. 28 a Russian, Aleksandr Vasilyevich Sokolov, was appointed deputy premier.

The amalgamation of smaller collective farms into bigger ones, started in the Soviet Union at the beginning of 1950, was also enforced in the Baltic states, and a Russian, F. Komarov, was in charge of the operation in Estonia. In an article in *Izvestia* of July 21, Veimer claimed that more than three-fourths of the peasant homesteads were organized in collective farms. Agricultural production, it was announced by Käbin in July, exceeded the prewar level, but industrial production was not satisfactory.

On Oct. 4 was promulgated a decree abolishing the former districts and communes and dividing the country into 39 *rayons*—administrative units of the Soviet type. At the elections of March 12 to the all-union parliament 798,330 (99·82%) out of a possible 799,776 electors cast their votes: Estonia elected 4 members to the Supreme Soviet and 25 to the Soviet of Nationalities.

Education. (1949) Elementary and secondary schools: pupils 156,000; University of Tartu: students 2,700, teaching staff 70.

Finance. Budget (1950 est.): revenue Rb. 1,039,248,000, expenditure Rb. 1,019,648,000.

See A. Kaelas, *Human Rights and Genocide in the Baltic States* (Stockholm, 1950); K. M. Smogorzewski, "The Russification of the Baltic States," *World Affairs* (London, Oct. 1950). (K. SM.)

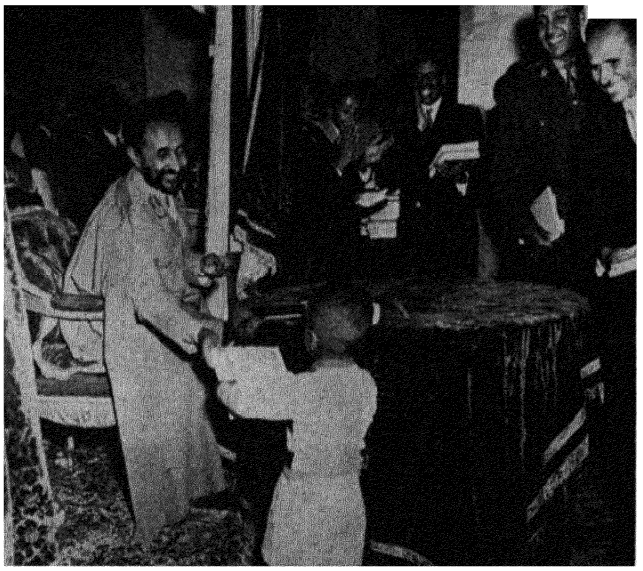
ETCHING: *see* DRAWING AND ENGRAVING.

ETHIOPIA. Independent empire of northeastern Africa bounded N. by Italian Eritrea (from 1941 under British military administration), W. by the Anglo-Egyptian Sudan, S. by Kenya, S.E. by Italian Somaliland and E. by British and French Somaliland. Area: *c.* 350,000 sq.mi. Pop. (no census ever taken, Dec. 1950 est.): 10,000,000,* but the ruling race, the Amhara, numbers about 2,000,000. Language: Amharic, the official language; also Tigrinya, Tigré, Galla, Somali, etc. Religion: Christian (Coptic rite) 57%; Moslem 17%; pagan, etc., 26%. Chief towns: Addis Ababa (cap., *c.* 250,000); Harar (*c.* 45,000); Dessie (*c.* 35,000); Dire-Dawa (*c.* 30,000). Ruler, Emperor Haile Selassie I; prime minister, Bitwadded Makonnen Endalkachaw.

History. During the year the government's attention continued to be focused on Lake Success where the United Nations general assembly was expected to take a final decision concerning Eritrea (*q.v.*). Ethiopia objected to the decision taken in Nov. 1949 by which the Italians returned to Somaliland (*q.v.*) as the administering authority. But the decision taken in Dec. 1950 to form a federation between Ethiopia and Eritrea was received with satisfaction. For the first time since 1941 Italo-Ethiopian reconciliation seemed feasible.

Friendly and co-operative relations continued with neighbouring governments. The demarcation on the ground of the frontier between Ethiopia and French Somaliland was completed early in 1950; and that of the Kenya-Ethiopian boundary began at the end of the year in accordance with an exchange of notes in 1947 which delimited it on the map. Discussions began with the Sudan government concerning a suggested aerial survey of the southern portion of the Baro salient. It was understood that practical proposals for the implementation of a general agreement reached in 1946 between the governments of Ethiopia, Egypt and the Sudan that the long proposed barrage on Lake Tsana ought to be constructed were being prepared for discussion. During

* The official Ethiopian estimate of 15,000,000 given by the *Demographic Yearbook 1948* of the United Nations appears high in the light of information from other sources. The Italian estimate on Jan. 1, 1940, for so-called Italian East Africa (Ethiopia, Eritrea and Italian Somaliland), was 11,216,000, which would bring the population of Ethiopia in pre-1935 frontiers to some 9,450,000.



Emperor Haile Selassie of Ethiopia presenting prizes to a young boy in Addis Ababa, May 1950.

1950 Ethiopia increased its diplomatic representation abroad by appointing ministers to Persia, Brazil, Mexico and Venezuela. Ethiopia agreed to receive 171 "displaced persons" and their families; the first party of these arrived in August.

The devaluation of sterling led to a slackening of demand for Ethiopian produce except coffee and to a sharp fall in local prices. This hit the farmers hard and the government felt impelled to grant them some relief in taxation.

A factor of major economic importance was the granting of a loan of U.S. $7 million to Ethiopia by the International Bank for Reconstruction and Development in Sept. 1950; $5 million of this was earmarked for road construction and maintenance, and the rest for the creation of a new development bank. The Ethiopian government would have certain conditions to fulfil in connection with the service of the loan and the raising of additional capital for development projects. To meet these obligations they had, it was understood, mortgaged the revenue from petrol taxes and other sources and furthermore reduced their note-issue cover in gold, silver and foreign "hard" currencies from 75% to 25%, increasing thereby their currency circulation.

The reconditioning and maintenance of the main road system was the obvious starting point of any serious plan of development. During 1950 the government completed the construction of a new reinforced concrete bridge over the Blue Nile, on the main route from the capital to the Gojjam province, but their resources were unequal to the greatly needed general overhaul of the roads built by the Italians. The repair of the road to the port of Assab on the Red sea held high priority. Traffic on this outlet to the sea had steadily increased and the competition was sufficient to cause a substantial reduction in freight rates to Jibuti on the Franco-Ethiopian railway.

Air communications with the outside world were good; and internal air traffic, which was operated by the Ethiopian Air Lines, was markedly increasing. In Sept. 1950 the U.S. Import and Export bank showed its confidence in the future of this company by advancing about U.S. $1 million to enable it to increase its equipment and in particular to purchase two Convair aircraft.

The Ethiopian government was anxious to encourage the investment of foreign capital in industry. On Feb. 28, 1950, a statement appeared in the *Official Gazette* to the effect that in the case of enterprises financed from abroad, which were

deemed by the government to be beneficial to the country, freedom would be granted from the payment of profit tax for five years from the date when production began; customs duties would not be charged on imported machinery; and facilities would be accorded for remittances abroad of funds to cover dividends, interest and the amortization of capital.

During the year ended Aug. 31, 1949, Eth.$ 10,530,806 was spent on education.

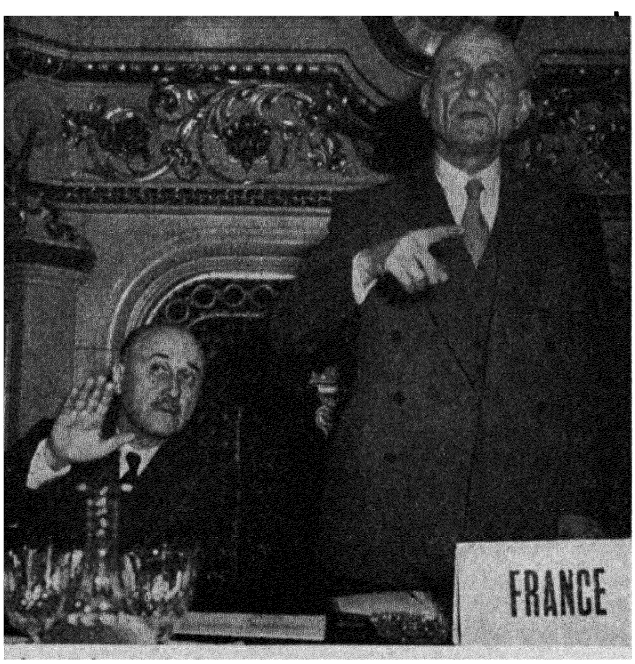
Education. Schools (Aug. 1949): elementary 407, pupils 52,965 (including 5,964 girls); secondary, pupils 1,079 (including 804 in Addis Ababa). Teachers, 1,615 Ethiopian and 286 foreign. There were 228 students abroad, mostly supported by the government.

Foreign Trade. (Million Eth.$, year ending Sept. 10, 1949; year ending Sept. 10, 1950, in brackets) import 90·9 (73·5); export 77·2 (75·9).

Finance and Banking. Budget (1947): balanced at Eth.$ 58 million. Monetary unit: Ethiopian *dollar*. Exchange rate (official): £1 = Eth.$ 7·00. (X.)

EUROPEAN COAL AND STEEL POOL (SCHUMAN PLAN). On the evening of May 9, 1950, Robert Schuman, the French foreign minister, read to the press a communiqué which the French council of ministers had approved that morning. It proposed, as an immediate and limited step towards achieving a united Europe, to place the Franco-German production of coal and steel as a whole under a common higher authority within the framework of an organization open to the participation of the other countries of Europe. René Massigli, the French ambassador in London, had called earlier in the day on Ernest Bevin, the British foreign secretary, and informed him briefly of the decision. It was a cardinal point of the proposal that the decisions of the higher authority should be binding on the governments of countries taking part, and when Jean Monnet (*q.v.*), French commissioner for planning, visited London from May 14-19 it became clear to the British government that the French government considered it desirable that acceptance by other governments of this principle should precede any working out of details.

On May 25 the French government proposed that a joint communiqué should be issued by all the governments concerned specifically stating their acceptance of the principle of a supra-national authority. To this the British government replied that it was willing to enter negotiations but would not accept in advance the idea of a supra-national authority. All attempts to reach a compromise failed and Britain accordingly refused the French invitation. In doing so it undertook to follow the course of the negotiations closely and to continue to study the proposal.



Robert Schuman (right) expounding his plan for pooling European coal and steel at the conference that opened in Paris, June 20, 1950. On his right is Jean Monnet.

On June 13 the national executive committee of the British Labour party issued a statement on policy entitled *European Unity* which was widely regarded as explaining the British government's attitude. It declared that the Labour party could never accept any commitment that limited its own or others' freedom to pursue democratic Socialism and to apply the economic controls necessary to achieve it; that changes in Britain's relations with western Europe must not impair her position as the nerve centre of the Commonwealth; and that, in general, the European peoples did not want a supra-national authority to impose agreements but international machinery to carry out agreements which had been reached without compulsion.

On the Schuman proposals specifically, the Labour party's statement urged that they be shaped in the interests of the peoples as a whole. What " shape " was meant was apparent from the observations that preceded this conclusion: that control of the heavy industries without public ownership could be effective only for negative purposes; that there was no doubt Europe's private industrialists feared overproduction and would try to re-organize restrictive cartels as in the past—" They will thus seek to pervert the Schuman proposals for their own selfish and monopolistic ends "; that, when there was a threat of recession and when private capitalists, fearing for profits, restricted production, then it was vital to maintain and increase production in these industries; that, before the Schuman proposals were put forward, the unwillingness of many governments to control their own basic industries had made European planning of coal and steel impossible; and that the opportunity now existed to fill the greatest gap in European economic co-operation.

The government's attitude to the Schuman invitation was debated in the House of Commons on June 26-27 and an opposition motion calling for participation in the conference, subject to maintaining freedom of action if the discussions showed the plan not to be practicable, was negatived by 309 votes to 289. It was clear from the debate, however, that the opposition were no more willing than the government to put the industry under supra-national control. Their argument was not that the French conditions should have been accepted but that had the question of European unity received more support from Britain they would never have been made.

The government of Western Germany had welcomed the plan in principle; the Netherlands and Belgium had also responded favourably, though in Belgium there was some anxiety lest the high authority should become an instrument of centralized economic planning, and the Dutch reserved the right to reject the scheme if in the course of negotiations it proved impracticable. Italy had also supported the plan. On May 18, President Truman had welcomed it as " an act of constructive statesmanship."

On June 3 a communiqué had been issued on behalf of the French, Western German, Belgian, Italian, Luxembourg and Dutch governments accepting the principles of a high authority whose decisions would be binding on these countries. Negotiations had begun in Paris on June 20 to work out the terms of a treaty and at the end of 1950 it was reported that they were nearing completion.

The French communiqué of May 9, on which the negotiations proceeded, had begun with the propositions that a united Europe could not be made by a single general plan. It would have to be built through concrete achievements which would first create a *de facto* solidarity. The gathering

together of the nations of Europe required the elimination of the age-old opposition of France and Germany. The pooling of coal and steel production should immediately provide a common foundation for economic development as a first step in the federation of Europe. The solidarity in production thus established would make it plain that any war between France and Germany would become not merely unthinkable, but materially impossible. Europe, with new means at her disposal, would be able to pursue the realization of one of her essential tasks, the development of the African continent.

The French government was ready to open negotiations, the communiqué of May 9 had stated, on the basis that the task of the common higher authority would be to secure in the shortest possible time: the modernization of production and the improvement of its quality; the supply of coal and steel on identical terms to the French and to the German markets as well as to the markets of other member countries; the development in common of export to other countries; and the equalization and improvement of living conditions of workers in these industries.

It was proposed that certain transitional measures should be instituted, such as the application of production and investment schemes, the establishment of compensating machinery for equating prices and the creation of an amortization fund to assist the rationalization of production. The movement of coal and steel between member countries would be freed of customs duty; it would not be permissible to set up differential transport rates.

Conditions would gradually be created which would spontaneously provide for the more rational distribution of production at the highest level of productivity. The proposed organization, in contrast to international cartels, which tended to impose restrictive practices on distribution, would unify markets and expand production.

A referee would be chosen by common agreement after ratification of the treaties embodying the agreements reached; governments would appoint on an equal basis independent persons as members of the high authority; means of appeal from the decisions of the high authority would be provided; a representative of the United Nations would be accredited to the authority and instructed to make a public report to the United Nations twice a year.

Much criticism was aroused by the proposal to put so important an industry even temporarily under the control of a body of international civil servants responsible neither to governments nor to a legislature. It was accordingly agreed during the negotiations to create an assembly of delegates from the parliaments of the member states. The authority would report to this assembly once a year and might be compelled to resign by a vote of censure passed by a two-thirds' majority. An arbitration tribunal charged with keeping the organization within the range of its legal competence was also to be set up. And finally there was to be a council of ministers with no powers of general control over the high authority but with powers, still ill-defined, to make recommendations on specific issues.

See (for, *inter alia*, translation of the communiqué of May 9, 1950) *Anglo-French Discussions regarding French Proposals for the Western European Coal, Iron and Steel Industries*, Cmd. 7970, H.M.S.O., London, 1950; (for a discussion of the economic aspects of a unified market) " The Coal and Steel Industries of Western Europe," *Economic Bulletin for Europe*, second quarter, 1950, Geneva. (X.)

EUROPEAN RECOVERY PROGRAMME.

Generally known as the Marshall plan after George C. Marshall (*q.v.*) the former U.S. Secretary of State who had suggested it, E.R.P. was a scheme whereby the U.S., through grants and loans, assisted a co-operative effort of 18 European states to achieve independence from outside economic aid. The European participants in the E.R.P. were: Austria, Belgium, Denmark, France, the German Federal Republic, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Sweden, Switzerland, Turkey, the United Kingdom, and the free territory of Trieste. These 18 countries were individually linked with the U.S. through bilateral treaties, concluded in the early summer of 1948, in which the U.S. undertook to provide assistance in accordance with the Foreign Assistance act of April 3, 1948, and the European countries promised in return to make an effort to attain independence from outside aid within four years by mutual and self-help.

Aid was administered by the Economic Co-operation administration (E.C.A.), a U.S. government agency headed, under the president, by an administrator, who, up to Sept. 25, 1950, was Paul Gray Hoffman and after that date William C. Foster (*q.v.*). The sharing out of the U.S. aid made available, as well as the stimulation of European mutual help and co-operation, was the task of the Organization for European Economic Co-operation (O.E.E.C.), an intergovernmental body with its headquarters in Paris on whose policy-deciding council all 18 participating European countries were represented.

The O.E.E.C. underwent some constitutional modifications during 1950. In January, it created the office of a political conciliator with undefined powers, in part-response to the desire of Paul Hoffman to see a strong personality appointed as political director to increase pressure for economic integration among the European participants in E.R.P. The Netherlands foreign minister, Dr. D. U. Stikker, was appointed to the new office and was also, in April 1950, elected chairman of the O.E.E.C. Also in April 1950, the consultative group of ministers, a ministerial committee of eight member states which had been established in Feb. 1949 as an inner cabinet, was abolished after it had been criticized by the countries not represented on it. Instead, it was decided that the full council should meet at ministerial level every two months.

In April also, the O.E.E.C. established liaison with the Council of Europe. One month later, the foreign ministers of Canada, France, the United Kingdom and the U.S. suggested that the O.E.E.C. should establish an informal working relationship with the U.S. and Canada to consider the problems arising from the simultaneous pursuit of European economic recovery and Atlantic rearmament, and the suggestion was followed up. All this, however, did little to affect the established character of the O.E.E.C., which in 1950 continued to work excellently as a clearing house and negotiating platform for the economic policies of its member states, but never attempted to establish itself as a supranational authority or to exert pressure on behalf of policies of its own.

The year 1950 was one of continued vigorous economic recovery in the individual E.R.P. countries. It also produced the return to multilateral trade inside western Europe through the institution of the European Payments union. But more important than everything else in its impact on E.R.P. was the change of world economic climate brought about by the Korean war and the consequent American rearmament. This change revolutionized the situation which had originally led to the inauguration of E.R.P., largely solved the European dollar problem and put a number of other problems, especially a shortage of raw materials, in its place. As a consequence, E.R.P. in its original conception seemed to have lost a great deal of its former importance by the end of 1950, though the need for American-European economic co-operation continued.

U.S. aid flowed to western Europe in 1950 at a slowly decreasing but still very substantial rate. From July 1, 1948, to June 30, 1949, it amounted to $4,875 million and from

July 1, 1949, to June 30, 1950, to $3,628 million. For the year from July 1, 1950, to June 30, 1951, $2,526 million were appropriated by congress for E.R.P. purposes, which was divided among the European recipients in the same proportions as in the previous year. These grants and loans were only to a very limited extent directly used by the recipient countries for those new capital investments which enabled them to restore and expand their war-damaged economies. They were used to cover their indispensable current dollar imports of food, raw materials and consumer as well as capital goods; they enabled them to concentrate their undivided attention and effort on reconstruction at home, and they freed them from those fatal distractions and bottlenecks which current shortages caused by lack of dollars would otherwise have imposed.

In this highly effective way, E.R.P. aid enabled the countries of western Europe to stage a postwar recovery which the O.E.E.C. described in its second annual report of Feb. 7, 1950, as "probably without precedent." The report stated that American aid of about $6,000 million had permitted an expansion of annual production of about $30,000 million in the recipient countries. The report estimated the increase in western European total production during the first two years of E.R.P. at about 30%. Significant percentage increases were: coal 18%, steel 56%, electricity 16%, engineering 30%, chemicals 25%, textiles 35-40%, grain 37%, potatoes 24% and sugar 46%. These production increases had enabled the E.R.P. countries to bring inflation under control and to balance their budgets, although virtually none of the increases had been devoted to direct increases in private consumption; most of them were absorbed by industrial and agricultural re-capitalization, with defence and social services taking second and third place.

The trade position of the E.R.P. countries had also improved. Intra-European trade, which had been frozen almost to a standstill before the introduction of E.R.P. in 1948, had thawed and was in Feb. 1950 probably higher than prewar. The total deficit of the group as a whole in its accounts with the outside world had decreased from $7,500 million in 1947, through roughly $5,000 million in 1948, to just under $4,000 million in 1949. But this deficit, the elimination of which by mid-1952 was the chief aim of the E.R.P., still remained the black spot in an otherwise bright picture. The O.E.E.C. report of Feb. 1950 forecast its further gradual reduction, but not its complete disappearance by 1952. Given reasonably favourable world economic conditions, the report expected that it would be reduced from $3,900 million at the end of 1949 to about $2,400 million by mid-1951 and to $1,400 million by mid-1952. Most of this remaining deficit, however, would be a dollar deficit, incurred mainly in trade with the U.S.; and the O.E.E.C. report stated that this intractable problem called for action "far beyond the fields of responsibility of the O.E.E.C. countries themselves." The O.E.E.C. countries would have sufficient goods for export to balance their accounts by 1952. But this would not help them unless the U.S. wanted the goods and found ways and means of absorbing them. Little did the O.E.E.C. planners foresee that this problem, which did not seem capable of being solved by 1952, would disappear, although perhaps temporarily, by the end of 1950 and that the U.S. within that short time would become so ravenous a buyer on the world markets as to wipe out her export surplus and the consequent world dollar problem.

During the first half of 1950, when this development was unforeseeable, E.R.P. politics were largely determined by American pressure for greater integration of west European economies. Paul Hoffman, the then administrator of the E.C.A., said in a newspaper interview in Feb. 1950 that, while the European response to U.S. aid had been excellent as far as self-help was concerned, it left something to be desired in the field of mutual help; and he called for more boldness in sweeping away trade restrictions and for the creation of a unified market in western Europe. Against this, it was pointed out by European participants, especially the United Kingdom, that the national economies of the European E.R.P. countries were competitive rather than complementary; that to make them complementary and thus fit for fusion in an unified economy required agreed investment policies over a far longer period than four years; and, moreover, that such investment policies, to be effective, implied a far larger degree of government planning and control over private enterprise and private investment than most countries were willing to contemplate.

The European countries did, however, respond to Hoffman's proposals in two ways: first, through the increasing "liberalization" of intra-European trade through the gradual abolition of trade quotas; and, secondly, through the establishment of the European Payments union, which put an end to the rigid bilateralism of postwar trade in Europe. As a result, western Europe in 1950 did not become a unified market or free trade area—its national economies remained apart and customs-protected—but it returned more or less to the prewar condition in which current trade was not restricted by currency regulations or by direct government intervention through quotas and licences.

By far the greatest achievement in this respect was the creation, on July 1, 1950, of the European Payments union which took the place of the intra-European payments schemes of the two preceding years. Like the latter, it was a mechanism for compensating or clearing the debits and credits arising from current business between member states. Unlike them, it was an instrument for multilateral as opposed to bilateral clearings. Under the former schemes, each member nation had to clear its accounts with each other member nation individually. Under E.P.U. a member nation was only concerned with its credit or debit position *vis à vis* the other members of the group as a whole. This step towards normalcy reflected the growing strength of the economies concerned, but it was still assisted by American funds in two ways: first, the U.S. provided an initial working capital of $350 million; secondly, it underwrote all gold losses that the United Kingdom might suffer as a result of accumulated sterling balances being used by other member countries for clearing debts with the United Kingdom through the E.P.U. This special provision was made in consideration of the status of sterling as a world currency widely used outside Europe, and it enabled the United Kingdom to join the E.P.U. as a full member, without the reservations she had at first intended to make.

The technical arrangements of the E.P.U. were as follows: surpluses and deficits incurred by member countries in their mutual trade would take the form of claims on, or debts to, the E.P.U. to the extent of a quota allocated to each country on the basis of its total trade with other members during 1949; the amount of the quota represented the utmost limit of any obligation to lend to, or any right to receive credit from, the E.P.U. but only 20% of it could be used in this way; beyond this 20%, deficits and surpluses had in an increasing proportion to be part-cleared through payments in gold. The quotas allotted to the participating countries in millions of E.P.U. units (E.P. Unit=$U.S. 1) were as follows, with the percentage of the credit total in brackets: Austria 70 (1·8%), Belgium/Luxembourg 360 (9·1%), Denmark 195 (4·9%), France 520 (13·2%), Germany 320 (8·1%), Greece 45 (1·1%), Iceland 15 (0·4%), Italy 205 (5·2%), Netherlands 330 (8·3%), Norway 200 (5·0%), Portugal 70 (1·8%), Sweden 260 (6·6%), Switzerland 250

(6·3%), Turkey 50 (1·3%), and the sterling area (excl. Iceland) 1,060 (26·9%).

In addition to their quotas certain "structural" debtor countries, especially Austria and Greece and to a lesser extent Iceland, the Netherlands, Norway and Turkey, were given initial credit balances totalling 324 million units, and certain chronic creditors (the United Kingdom, Sweden, Belgium) were saddled with initial debit balances of altogether about 230 million units. Inside the quota system, the use of credit and the rights and obligations of settlement in gold were ruled by the following formula:

Percentage of quota	Debtors		Creditors	
	Use of Credit	Gold payments	Use of credits	Gold payments
First 20	20	0	20	0
Second 20	16	4	10	10
Third 20	12	8	10	10
Fourth 20	8	12	10	10
Fifth 20	4	16	10	10
100	60	40	60	40

The workings of E.P.U. during its first half year were on the whole satisfactory. The only major hitch occurred in the case of Germany, which nearly exhausted its credit quota within the first two months and had to be given a special credit of 120 million units on Dec. 15 to enable it to carry on. The United Kingdom and France earned some gold. By and large, however, the credit system proved capacious enough to make a further substantial expansion of intra-European trade possible during the second half of 1950. All this, however, was completely overshadowed during the same period by the impact on E.R.P. of the economic consequences of the Korean war. The whole programme, from its inception to the middle of 1950, had been based on the assumption that there was a large and structural U.S. export surplus, which created a chronic dollar shortage in the rest of the world. Its purpose was to bridge that dollar gap for the immediate present by outright gifts; it was also to enable Europe to increase its economic strength sufficiently to close the gap eventually by exporting more to the U.S. At the beginning of 1950, it was increasingly recognized that European economic strength alone could not close the dollar gap by 1952, or perhaps at any time. But by the end of 1950, with European economic strength still only very partially restored, the dollar gap had disappeared.

Unprecedented U.S. purchases on the world markets, mainly of raw materials for rearmament and strategic stock-piling, balanced U.S. accounts with the outside world in the second half of 1950 for the first time in 13 years. Many of these purchases were made in western Europe or western European dependencies; as a result, the European E.R.P. countries experienced during the second half of 1950 big increases in their exports and their hard currency reserves, large improvements in their trade balances and a very big reduction—in some cases the complete disappearance—of their dollar deficit. The largest recipient of aid, the United Kingdom, was the first to draw the consequences from this new situation by agreeing to the indefinite suspension of further aid from Dec. 31, 1950. The other 17 countries still continued to receive aid but there was no doubt that the independence from outside aid for the purpose of balancing their trade accounts which it had been the aim of E.R.P. to achieve by 1952 was, under the changed conditions of late 1950, approaching much faster in nearly all cases.

On the other hand, a new set of economic problems faced the E.R.P. countries by the end of 1950. The gravest of them was a world-wide raw material shortage, arising from the extraordinary raw material requirements of U.S. rearmament and stock-piling. There were also threatening manpower European defence needs put a new and heavy burden on the still convalescent economies of the E.R.P. countries. It was clear by the end of 1950 that these problems would demand continued European economic co-operation, and in all probability continued U.S. aid to Europe. But it was likely that this U.S. aid would in future be related to defence rather than to economic recovery and balanced trade, and it was not clear whether it would be dispensed in the context of E.R.P. or in the somewhat different framework of the North Atlantic treaty organization. As originally conceived, E.R.P. seemed at the end of 1950 fast approaching a premature consummation. (S. HR.)

EXCHANGE CONTROL AND EXCHANGE RATES. Despite stringent control of imports, most countries had experienced increasing difficulties in balancing their dollar accounts in 1949 and had been forced to liquidate substantial holdings of gold and dollars. In 1950, although U.S. financial assistance declined, many countries, particularly those in the sterling area, added to their reserves of gold and dollars at an accelerating rate, while the United States gold stock declined steadily from its postwar peak of $24,771 million (Aug. 1949), to $23,153 million at the end of Nov. 1950. The reduction in the volume of foreign imports from the dollar area was attributable in part to higher levels of industrial and agricultural production abroad and also to the more stringent control of dollar imports into the sterling area since the summer of 1949. Furthermore, the recovery of U.S. business activity, the rise in raw material prices following the beginning of the Korean war, and the nascent rearmament programme contributed to the expansion of U.S. demand for foreign goods and services. But there was no doubt that the widespread currency devaluations that took place in the autumn of 1949 were also an important cause of the substantial improvement in the balance of payments of most countries.

Nevertheless, the improvement in the world economic balance did not give rise to any marked trend toward the relaxation of restrictions and the elimination of bilateral trading arrangements, and stringent exchange controls were still widespread throughout 1950. The drastic limitation of dollar imports into the sterling area in 1949, for example, remained in full effect. By the end of the year, however, there were signs that some modification of this restriction was contemplated. Furthermore, action had been taken to relax import restrictions in Canada, progress had also been made in the liberalization of intra-European trade and payments, and some countries, such as France, Italy and the Netherlands, had taken steps to encourage private capital imports by assuring reasonable facilities for the re-transfer of earnings and capital.

The Sterling Area. For the sterling area 1950 was a year of stable exchange rates. With the exception of the devaluation of the Icelandic krona by no less than 42·5% on March 20, no significant changes occurred. That change was primarily a delayed adjustment to the changed outlook for the fish exports to the United Kingdom. Hitherto the effects of a deteriorating market had been cushioned by the payment of subsidies to exporters. When the collapse of the market in the spring of 1950 would have rendered the continuance of this system an unbearable burden on a budget already out of balance, the opportunity was taken to abandon it and seek the restoration of equilibrium, internal as well as external, by lowering the external value of the currency.

Controversy continued throughout the year concerning the future of the Pakistani rupee—the only sterling area currency not devalued in Sept. 1949—while the possibility of the revaluation of the Australian pound was widely discussed, partic-

The 1949 devaluation of sterling had been intended to deal with the dollar problem, and indeed the improvement in the sterling area's dollar balance in 1950 was remarkable. A net gold and dollar deficit of $962 million in the first half of 1949 was transformed into a net surplus of $220 million in the first half of 1950. Aided by European Recovery programme grants and loans and drawings on the Canadian credit amounting in all to about $1,000 million, the central gold and dollar reserves stood at $2,756 million on Sept. 30, 1950—more than twice as high as at the time of devaluation—and were still rising. Because of this improvement, aid to Great Britain under the European Recovery programme was to be suspended from Jan. 1, 1951.

The role of the exchange rate adjustment in this transformation cannot be isolated. In the nine months following devaluation the improvement was almost entirely the result of a reduction of 31% in the sterling area's dollar imports. Since a cut of only 25% had been agreed upon at the Commonwealth Finance Ministers' conference of July 1949, devaluation, which increased the prices of dollar goods to sterling area buyers by 42%, probably was effective in reducing dollar import demands. In the same period sterling area exports to the dollar area increased modestly in dollar value, a change no doubt associated with the rising trend of economic activity in the U.S. as well as with the lower dollar prices ruling for many products after devaluation. Only part of the change, however, is traceable to movements in trade with the dollar area. The remainder resulted mainly from the cessation of gold losses to Belgium, Switzerland and other countries outside the dollar area and from semi-speculative movements of funds, including acceleration and postponement of sterling payments and receipts. These changes were also associated to a significant degree with the strengthening of sterling. In any case, by the middle of 1950 the sterling area had apparently achieved at least a temporary balance in its dollar accounts even apart from U.S. assistance and speculative capital movements. Moreover, that equilibrium had been reached without the help of the spectacular rise in certain sterling area raw material prices which had taken place after the outbreak of hostilities in Korea.

The position of the United Kingdom itself was less satisfactory. It was true that wage rates and the cost of living rose by only about 2% in the year after devaluation—less than in the corresponding period before—despite a rise of 25% in import prices. Furthermore, at least in the first half of the year, the increase in national income was apparently sufficient to permit the rate of net investment to be maintained and that of both government spending and private consumption to be increased, so that even the limited anti-inflationary measures announced by the government were never severely tested. But the increase in the surplus on current account from £16 million in the first half of 1949 to £52 million in the first six months of 1950 was very modest and resulted entirely from a rise in net earnings on invisible account. The visible trade deficit rose from £43 million to £108 million (f.o.b. basis) because the expansion in the volume of British exports was far from sufficient to compensate for the sharp deterioration in the country's terms of trade—partly a consequence of devaluation. In dollar terms the United Kingdom deficit with the dollar area was $428 million less than in the first half of 1949, but this change was entirely the result of a fall in imports and a sharp improvement in non-trade earnings. The value of exports from the United Kingdom to the dollar area actually declined slightly during the first six months of 1950.

A large part of the rise in the sterling area's gold and dollar reserves was attributable to the stronger position of its overseas members, including the British colonies. In the first half of 1950 the sterling area other than the United Kingdom recorded a dollar surplus of $220 million, as compared with a deficit of $177 million in the corresponding period of the previous year. Rising raw material prices must have raised this surplus substantially in the second half of the year. Part of the improvement was brought about by restriction of dollar imports, and since the United Kingdom was unable to increase its exports to the other sterling area countries by an equivalent amount, the increase in the gold and dollar reserves in London was almost matched by a rise in the United Kingdom's short-term liabilities to various countries in the sterling area, such as Australia, New Zealand, Malaya and the African colonies.

Restrictions on transfers from the sterling area to Belgium and Switzerland were eased in accordance with the provisions of the European Payments union, and currency movements between London and the Scandinavian countries were virtually freed in December. Towards the end of the year the Union of South Africa—which did not participate in the sterling area dollar pool—announced the broad principles of a liberal licensing policy to be adopted for dollar imports in 1951. The proposed relaxations were to operate so that within the limits of its total current income of hard and soft

WORLD EXCHANGE RATES, DEC. 11, 1950

Country	Currency Unit	Rate per £ sterling	Rate per U.S.$
Australia	£A	1·25	0·45
Austria	Schilling	59·81	21·36
Belgium	Franc	140·0	50·00
Brazil	Cruzeiro	51·80	18·50
British Honduras	B.H.$	4·00	1·43
Burma	Rupee	13·33	4·76
Canada (free rate)	Can.$	2·935	1·05
Ceylon	Rupee	13·33	4·76
Chile	Peso	86·80	31·00
Colombia	Peso	5·46	1·95
Czechoslovakia	Koruna	140·00	50·00
Denmark	Krone	19·34	6·91
Egypt	£E	0·98	0·35
Ethiopia	E.$	6·94	2·48
Finland	Markka	645·00	230·0
France	Franc	980·00	349·8
Germany (Fed. Rep.)	D.Mark	11·76	4·20
Greece*	Drachma	42,000	15,000
Hong Kong	H.K.$	16·00	5·71
Hungary	Forint	32·87	11·74
Iceland	Krona	45·61	16·29
India	Rupee	13·33	4·76
Iraq	Dinar	1·00	0·36
Irish Republic	£	1·00	0·36
Israel	£I	1·00	0·36
Italy	Lira	1,750	625
Japan	Yen	1,008	360
Jordan	Dinar	1·00	0·36
Lebanon	£L	6·13	2·19
Netherlands	Florin	10·64	3·80
Netherlands West Indies	Florin	5·28	1·89
New Zealand	£NZ	1·00	0·36
Norway	Krone	20·00	7·14
Pakistan	P.Rupee	9·27	3·31
Persia	Rial	90·30	32·25
Philippines	Peso	5·60	2·00
Poland	Złoty	11·20	4·00
Portugal	Escudo	80·50	28·75
Singapore	S.$	8·57	3·06
South Africa	£SA	1·00	0·36
Spain	Peseta	30·66	10·95
Sweden	Krona	14·49	5·18
Switzerland	Franc	12·25	4·38
Syria	£S	6·13	2·19
Thailand	Baht	35·00	12·50
Turkey	Lira	7·84	2·80
United Kingdom	£	1·00	0·36
United States	U.S.$	2·80	1·00
U.S.S.R.	Rouble	11·20	4·00
Yugoslavia	Dinar	140·00	50·00

* With certificates.

The table shows official par values agreed with the International Monetary Fund or average of buying and selling rates.

currencies, South Africa's imports would be thrown open to world-wide competition. Discrimination would take place only to the extent that capital inflow from soft currency countries exceeded the capital inflow from hard currency countries.

The discriminatory dollar import policy of the rest of the sterling area, however, was not modified. Within the framework of the General Agreement on Tariffs and Trade, consultations took place on this point in November, and opinions were expressed that, because of the stronger position of the sterling area, a cautious relaxation of hard currency import restrictions would be feasible in the cases of Australia, Ceylon, New Zealand and the United Kingdom. The governments of these countries took note of the views expressed, but no action had been taken by the end of the year.

North America. *United States.* Imports into the U.S. in 1950 increased with the rising trend of business activity, whereas U.S. exports were lower, not only because foreign countries were unable to finance a larger volume of purchases, but also because their own production continued to rise. The total U.S. surplus on current account (goods and services) declined from $6,500 million in 1949 to an annual rate of $1,900 million in the first nine months of 1950. Indeed, in the third quarter merchandise transactions came into approximate balance, whereas the surplus on goods and services shrank to an annual rate of less than $300 million, the lowest rate since 1937. Although part of this was seasonal, it also served as a dramatic indication of the extent to which both market demands and the terms of trade were undergoing fundamental shifts in favour of foreign countries.

Canada. Though controls on imports into Canada from the United States were relaxed and purchases of U.S. goods increased markedly in the second quarter of 1950, Canadian gold and U.S. dollar holdings rose steadily. The Canadian dollar, quoted in the free market in New York at a discount of 10% in Dec. 1949, appreciated steadily, almost reaching par with the U.S. dollar in June. As speculation on a possible revaluation of the currency mounted, short-term capital flowed into Canada in ever-increasing volume until by the end of September the country's holdings of gold and short-term U.S. dollar assets stood at U.S. $1,790 million, an increase of $800 million in a year, three-quarters of which had taken place in only four months.

To deal with the inflationary threat which this massive movement of capital brought, the Canadian government suspended the fixed official rate of the Canadian dollar on Sept. 30 and allowed its exchange value to fluctuate in accordance with free market operations. At the same time it greatly relaxed the emergency controls over imports from the U.S. Thereafter the exchange rate hovered around 1·05 Canadian dollars to the U.S. dollar, as compared with the previous fixed par value of 1·10. To prevent the possible emergence of broken cross-rates between the U.S. dollar, the Canadian dollar and sterling, the Canadian Exchange Control board stood ready to buy or sell sterling for U.S. dollars at the official rates of 2·79875 and 2·80125 U.S. dollars to one pound sterling.

Continental Europe. On the continent of Europe as in the sterling area 1950 was a year of comparative exchange stability despite the increasing threat of renewed inflation, first through sharply rising raw material prices and, towards the end of the year, through the anticipated effects of rearmament. A very significant step towards the liberalization of intra-European payments took place in September when the European Payments union was set up, within the framework of the European Recovery programme. At the same time measures were taken progressively to reduce quantitative restrictions on intra-European trade and payments. Unlike its predecessor, through whose arrangements deficits and surpluses between pairs of countries had been settled bilaterally, the European Payments union was fully multilateral, providing for the offsetting of such bilateral balances and the settlement, partly on credit and partly in gold, of the net surpluses or deficits with the union. In the first five months of its operation (July-November) the United Kingdom and France built up strong creditor positions with the union. Germany, on the other hand, ran an unexpectedly high deficit, exhausting its credit facilities and making gold payments of more than $100 million to the union from which it had also to receive special assistance.

In 1950 the external position of France improved substantially, the over-all balance of payments deficit of the franc area falling to $168 million in the first half of 1950, as compared with $483 million in the corresponding period of 1949. Within Europe, France became a substantial creditor and received about $40 million in gold in the first five months of the operations of the European Payments union. These changes brought a notable return of confidence in the franc, and in the course of the year several steps were taken towards the liberalization of dealings in foreign exchange. Restrictions on the import and export of bank notes were greatly eased as were the regulations relating to the re-transfer both of foreign capital invested in France and of earnings from it. The number of currencies traded in the free market was increased and the scope of forward exchange operations extended.

The position of some countries that had devalued by a substantial amount in 1949 was less fortunate. The Netherlands and Denmark in particular were hit by the deterioration in their terms of trade, and the stability of the Finnish currency continued to be threatened by domestic inflation. The position of the Belgian franc—which had been devalued by only 12% in 1949—was relatively weaker than in the previous year. The gold and foreign exchange reserves of the Belgian National bank declined steadily and, influenced also by scare buying after the outbreak of hostilities in Korea, had dropped by $200 million between Aug. 1949 and Nov. 1950. Apart from the continuing surplus with the Netherlands, Belgium's strong European creditor position of 1949 practically disappeared. To discourage speculative purchases of foreign currencies and protect the National bank's reserves, the use of imported Belgian bank notes was limited in October to payments within the Belgian-Luxembourg Economic union, and forward exchange operations in all currencies except the U.S. and Canadian dollars were suspended a month later. In contrast, the position of the Swiss franc and both the Italian and the Turkish lira, which did not devalue in 1949 or did so by a relatively small percentage, remained relatively strong.

In 1950 successive steps were taken in Austria to lower the external value of the schilling and to unify the existing multiple rate structure. Until Jan. 25 exporters were required to surrender 40% of their exchange proceeds at the basic rate of Sch. 14·40 to the dollar and could either sell the remainder at the premium rate of Sch. 26·00 or use it to purchase imports. From Jan. 26 the latter practice was limited to specific quotas established for each exporter so that the great bulk of export transactions were conducted at an effective rate of Sch. 21·36 to the dollar. From Oct. 5 all commercial transactions were conducted at the 21·36-schilling rate. The basic rate, hitherto applicable to essential imports, was abolished, while the premium rate, hitherto also used for luxury imports, was confined to certain non-trade transactions, notably tourist expenditures.

The new złoty introduced into circulation on the occasion of the drastic Polish currency reform at the beginning of November formally contained 0·222168 grains of fine

gold, which placed it at par with the Soviet rouble and gave an exchange rate of Zł. 4 to the U.S. dollar, as compared with the previous effective rate of Zł. 400 (old) to the dollar. However, this rate, like its predecessor and others in eastern Europe, had little influence on the volume or direction of the country's foreign trade, which was largely conducted by state-owned agencies at prices negotiated by agreement and generally corresponding to world market prices.

Spain continued to operate a multiple exchange rate system arranged to give the advantage of a low peseta cost to imports of raw materials and other necessary imports and higher rates to the less essential products and exports whose local costs were relatively high. Until October there were 11 fixed buying rates ranging from P. 10·95 to P. 28·47 to the U.S. dollar and 12 fixed selling rates ranging from P. 11·22 to P. 39·47 pesetas to the dollar. On Aug. 1 a free exchange market was introduced through which financial transactions and a few trading operations were effected. After Oct. 18 the number of official rates was somewhat reduced, but various mixed effective rates arose as a result of the purchase and sale by the authorities of proportions of exchange proceeds and requirements which varied according to the goods exported or imported.

Middle East. Only minor changes, motivated by local conditions, were made in exchange rates and regulations in the middle east in 1950. Because of the large foreign exchange income from oil royalties, Persia had not devalued the rial in 1949. In the course of 1950, however, various changes were made in the certificate system in operation, the net effect of which was to depreciate the rial for most other private transactions. The official selling rate of Ri. 32·5 to the U.S. dollar remained in effect for government transactions and transactions with the Anglo-Iranian Oil company but was not applicable to sugar imports after Jan. 8, 1950. Exporters other than the Anglo-Iranian Oil company received, in addition to rials at the official rate, negotiable certificates to the amount of 100% of their exchange proceeds, which they sold either directly or through authorized banks to importers or others authorized to purchase exchange on presentation of a certificate for an equivalent amount. The central bank also dealt in certificates, and the rate for them was held stable at about Ri. 7·50 throughout the year, giving an effective certificate rate of about Ri. 40 to the dollar. From July 24 this rate was applicable only to essential imports—amounting to about 60% of the total—and to all export proceeds not used or sold by the exporter within four months. In order to discourage foreign exchange hoarding, exporters selling their exchange proceeds within four months—later increased to 16 months and subsequently reduced to one year—could take advantage of the more favourable fluctuating rate obtainable in the free market in which importers of non-essentials had to purchase exchange. At the end of November all transactions were channelled through authorized banks and the free rate stabilized at Ri. 48·75 to the U.S. dollar.

Mainly because of the continued high level of imports an exchange crisis developed in Israel in the summer. To cope with it, taxes ranging from 2% to 6% were imposed on exchange sales for purposes other than the import of essential goods.

In 1950 the monetary systems of Syria and Lebanon became, formally at least, more independent of one another. For a time the Lebanese pound was quoted at a 7%—15% premium above the Syrian pound, although the latter remained officially of equal value. In addition, as from March 1950, the respective exchange control systems, to which transactions with third countries were hitherto subject, were also applied to transactions between them. Most transactions continued to be conducted through the free market where the pound sterling was traded at a discount which became progressively smaller as the year passed.

Far East. Despite disturbed economic and political conditions in many countries, exchange rates and regulations remained relatively stable. As China came completely under Communist control, exchange transactions with the rest of the world dwindled. In the Philippines, 1950 saw the working out of the exchange control system introduced at the end of the previous year. The most characteristic feature of the free markets existing in various far eastern countries was the steady rise in sterling, which was close to par by the latter part of the year.

The only changes of major significance took place in Indonesia, where monetary and financial conditions had continued to be unstable after the country's independence had been achieved at the end of 1949. In an effort to deal with the balance of payments disequilibrium a new certificate system was introduced on March 13, 1950, which aimed at increasing exports and in particular at curbing imports. Exchange for authorized transactions continued to be bought and sold by the authorities at the old official rates of Fl. 3·79 to Fl. 3·81 per U.S. dollar. However, in addition, exporters received a certificate expressed in florins (guilders) equivalent to 50% of the exchange sold, while importers were required to present a similar certificate equal to the full florin equivalent of the amount of foreign exchange required. Dealings in certificates were carried on through authorized banks, and since the price was maintained at 1·99 buying and 2·00 selling, the effective buying and selling rates were Fl. 7·56 and Fl. 11·43 to the U.S. dollar.

Latin America. The use of complicated exchange control systems, composed of licenses, multiple rate structures (often including mixed effective rates resulting from the application of different rates to specified percentages of export proceeds) exchange taxes, certificates and free markets for specified transactions, continued to be widespread in Latin America. These aimed chiefly at securing sufficient foreign exchange receipts and regulating imports in such a way as to obtain an adequate volume of necessities, restricting luxuries and sometimes protecting local industries.

Argentina. Mainly in order to bolster the weakening market position of some of its export products and at the same time to increase production of them by raising their peso prices, the Argentine government devalued the peso on Aug. 29, 1950, by 24%—36% for exports, depending on the previous rate applicable, and by a somewhat smaller percentage for imports. At the same time the exchange control system was simplified considerably, the number of effective rates being reduced from nine to three. The preferential selling rates of 3·73 and 5·37 and the basic buying rate of P. 3·3582 to the U.S. dollar were consolidated into a single new rate of P. 5·00 to the dollar applicable to the major exports and imports of fuels. A single rate of P. 7·50 to the dollar, used for non-regular exports and essential imports not granted exchange at the P. 5 rate, replaced the basic selling rate of P. 6·09 to the dollar and the preferential buying rates of P. 4·83 and P. 5·73 to the dollar. Finally the auction selling rate of P. 12·53, used for imports of luxury goods since July 1950, was abolished and the free rate, formerly pegged at P. 9·00 to the dollar, allowed to find its own level. This rate, which fluctuated around P. 13·65 to the dollar in the following months, was applicable to export goods not readily marketable abroad, to luxury imports and also to authorized non-trade remittances. As before, the granting of permission to buy foreign exchange for imports was dependent on their country of origin as well as on the category of goods.

Bolivia. Various changes amounting to a depreciation of the currency were made in Bolivia. Up to Feb. 27, 1950, the

official buying and selling rates of 42·00 and 42·42 bolivianos to the U.S. dollar respectively were applicable to specific percentages of all export proceeds and to all essential imports. For specified percentages of mineral exports and imports of semi-essentials, lower rates of B. 55·50 and B. 56·05 were used, whereas luxury imports and most financial transactions were conducted at the free market rate of more than B. 100 to the dollar. Thereafter slight changes were made by lowering the intermediate rate to B. 60 to the dollar and changing the categories of goods to which the various rates applied. In April the B. 42 rate was abandoned and a new par value of B. 60 to the dollar announced. The new buying and selling rates of B. 60·00 and B. 60·60 were applied to specified percentages of foreign exchange proceeds of tin exports, to the proceeds of basic quotas of other exports, and to most imports, specified financial payments and all government transactions. All other permitted foreign exchange operations were carried on at the free rate of B. 100 to the dollar, a rate which was, however, held stable by central bank intervention. The exchange surcharge of B. 1 to the U.S. dollar levied on all private foreign exchange transactions remained unchanged.

On Nov. 1, 1950, a new arrangement was made permitting tin exporters to retain 40%-42% of their export proceeds—a lower proportion than before—and requiring them to turn over the remainder to the authorities at the official buying rate of B. 60 to the U.S. dollar.

Chile. Various changes were made in the rather similar system in effect in Chile. On April 17, 1950, a new set of official rates was announced, substantially similar to those temporarily in effect since Jan. 10. The preferential selling rate of 25·10 pesos to the U.S. dollar, used only for newsprint imports, and the commercial buying and selling rates of P. 43·00 and P. 43·10, applicable to export proceeds not sold at lower rates and to the majority of imports, were abolished, the latter being replaced by rates of P. 60·00 and P. 60·10 to the dollar. The government buying and selling rates of P. 19·37 and P. 19·47 continued to be applicable to that proportion of the major mining companies' export proceeds equivalent to their local currency production costs and to designated government non-trade remittances. Similarly the official buying and selling rates of P. 31·00 and P. 31·10 were retained for certain additional peso requirements of the mining companies, for varying proportions of the exchange proceeds of certain other exports, for varying percentages of essential imports and for some non-trade payments.

The new commercial buying rate was applicable to the remaining peso requirements of the mining companies, to the remainder of those export proceeds, part of which had to be surrendered at P. 31·00 to the dollar, and to the proceeds of most minor exports. The corresponding buying rate was used for exchange requirements for which exchange was partially granted at the P. 31·10 rate and for the total exchange requirements of all other imports. In addition the free rate, which fell steadily from P. 98·80 to the dollar in January to P. 86·55 in November and was used for some non-trade transactions, the gold rate of P. 140 applicable to exports of newly mined gold and imports of certain luxury goods remained in effect. (*See* also EUROPEAN RECOVERY PROGRAMME; GOLD; INTERNATIONAL MONETARY FUND; INTERNATIONAL TRADE; TARIFFS.) (A. STN.)

EXHIBITIONS: *see* FAIRS, SHOWS AND EXHIBITIONS.

EXPLORATION AND DISCOVERY. By far the most notable undertaking of 1950 were the Norwegian-British-Swedish expedition of 15 members under the leadership of Captain John Giaever to Queen Maud land and the French expedition under André Liotard to Adélie land — both in Antarctica (*q.v.*).

The two major expeditions in the Arctic regions, the Danish Peary land expedition and the expedition sent out by the Expeditions Polaires Françaises, continued their work in Greenland. In Baffin island an expedition of 20 men, organized by the Arctic Institute of North America and led by P. D. Baird, examined a considerable area of the island by canoe, sledge and ski, on foot and by aircraft, ascending many mountains and glaciers. Camps were established by means of the aircraft on the ice cap which occupies the centre of the island, and meteorological and glaciological observations were maintained there throughout the summer.

An expedition from St. Andrews university in Scotland, led by Dr. H. I. Drever, worked on the Rinks and Umiamako glaciers in west Greenland, which were well known for their high rate of movement; the expedition's glaciologist had himself lowered into the crevasses of the Rinks glacier for the closer observation of its crystalline structure. Geological work on Ubekendt island that had been left unfinished by a St. Andrews expedition at the outbreak of World War II was also completed.

The growing interest in the geography of the desert regions of the earth was reflected in a number of the expeditions of 1950. An Oxford university expedition, which included a geographer, a botanist, a zoologist and a soil chemist, worked in the Kirman area of southern Persia, studying closely the factors of the human environment as it presented itself in small selected areas of a few square miles in each case. Topographical and land use surveys were made and particular attention was paid to the local methods of irrigation. Apart from the cross-Channel and Mediterranean stages of the journey, the expedition went everywhere in its own 15-cwt. truck and it spent eight weeks on the sites of investigation in Persia which it had chosen.

Richard Goodchild of the British school at Rome continued his earlier work on the historical geography of Roman Africa by an archaeological reconnaissance of the sites which mark the Roman occupation of Cyrenaica. The massive defences of Boreium, erected by the emperor Justinian near the modern Marsa Brega, were found in a good state of preservation and its identification led to a reconstruction of the Roman itineraries for this frontier zone of the empire. The expedition included a geographer, so that its archaeological work was supplemented by an appreciation of the physical environment in which this frontier was established.

In Arabia, Wilfred Thesiger again attempted a penetration of the little-known mountains of Oman, but was much hampered by the hostility of the people he met and was able to add but little to the results of his earlier journeys. An archaeological and anthropological expedition from the University of California under Wendell Phillips worked in the Hadhramaut and Dhofar and a party, charged with the task of investigating the life and habits of the desert locust, made surveys in northern Oman.

In the Himalayas, two expeditions should be noticed; Harold William Tilman, unwearied by many years of mountain exploration, was again at the head of an expedition in Nepal and although little is yet known of the outcome, he was at least not thwarted by the political crisis in that country. An expedition which had already reached its chosen field of operation in Kashmir was less fortunate, for the impact of world events led to its recall before it had achieved anything. (F. GE.)

EXPORT-IMPORT BANK OF WASHINGTON. Created in 1934, this bank was made a permanent independent agency of the U.S. government by the Export-Import Bank act of 1945, approved July 31, 1945.

Its purpose is not only to facilitate the financing of U.S. exports but to assist in financing those development projects in foreign countries which will increase their productive capacity and their exports, thereby improving their foreign-exchange situation and making them better suppliers of materials and goods needed for import into the U.S. Its financing is generally limited to the dollar cost of U.S. materials, equipment and services required for development projects in foreign countries.

The bank is empowered to lend to U.S. exporters and importers and to private entities in other countries as well as to foreign governments. It finances specific export and import transactions on the application of U.S. exporters and importers where the nature of the risk involved is such that private credit cannot be obtained and when, in the opinion of its board of directors, there exists reasonable assurance of repayment. It also arranges, in favour of foreign purchasers, credits which are available on equal terms to all qualified U.S. exporters for financing the sale of U.S. export staples such as raw cotton.

The total amount of loans authorized by the bank from the time of its establishment in 1934 approximated $5,078,600,000 at the end of 1950. Disbursements during 1950 were $199,918,971 and repayments $160,018,494. Outstanding loans totalled $2,219,485,750 at the end of 1950. (S. SD.)

EX-SERVICEMEN'S ORGANIZATIONS.

An International Federation of War Veterans' Organizations (Fédération Internationale des Organisations d'Anciens Combattants or F.I.O.A.C.) was founded in Paris on Nov. 26, 1950. Delegates representing some 10 million ex-servicemen of 12 nations elected as president of F.I.O.A.C. Albert Morel, former secretary general of the Union Française des Associations des Combattants, and Elliot Newcomb, executive director of the American Veterans of World War II (Amvets), as secretary general. Countries represented in the new federation included Belgium, Brazil, Finland, France, Greece, Italy, the Netherlands, Norway, South Africa, Turkey, the United States and Yugoslavia.

Neither the British Legion, nor any of the Commonwealth organizations affiliated to the British Empire Service league joined F.I.O.A.C. South Africa was represented in it not by the South African Legion, founded in 1922 by Field Marshal Earl Haig and Field Marshal J. C. Smuts, but by the Springbok Legion. The two largest organizations of the United States—the American Legion and the Veterans of Foreign Wars—also did not join F.I.O.A.C. Invitations were sent to the associations of ex-servicement of the U.S.S.R., Poland and Czechoslovakia, but these refused to join.

Great Britain. The British Legion's annual conference was held at the Albert hall, London, May 28-30. The Duke of Gloucester said that the fact that the legion was non-political should not prevent them from harrying the government in power if it was in the interest of the members. Sir Ian Fraser, M.P., president, defending the legion against criticisms of its administrative expenses, said that the staff was no more than necessary to guide the efforts of some 50,000 to 100,000 active voluntary workers. He expressed gratitude to the Ministry of Pensions for its sympathy towards disabled ex-service men and women since World War II and for improvements and modifications of the pensions system, but averred that pensions and allowances still needed to be reconsidered, and some anomalies removed and basic rates increased. (*See* also WAR PENSIONS.)

Sir Ian Fraser was re-elected president and Major General Sir Richard Howard-Vyse was elected the eighth national chairman of the British Legion. The estimated membership of the legion was 1,174,268.

The British Legion (Scotland) held its annual conference at Peebles June 2-3. General Sir Thomas Riddell-Webster and Major General Sir James Syme Drew were respectively re-elected president and chairman for the Scottish area.

Europe. *France.* The Union Française des Associations des Combattants (U.F.A.C.), consisting of 48 large and small associations with a total membership of more than two million, held its general annual assembly in Paris Dec. 16-17. It protested against the government decision not to increase war pensions before Dec. 24, 1951, and against the rearmament of Germany. Marcel Engrand was elected chairman and Paul Jourdan secretary general.

Italy. During the year the Associazione Nazionale Combattenti e Reduci and Associazione Nazionale Mutilati pressed the government and parliament to increase the pensions of the war disabled. On May 5 about 500 war disabled " occupied " the Treasury asking to be received by the minister. On June 22 deplorable scenes, instigated by Communist senators, took place in the Senate during the discussion of the new law on war pensions.

Alcide De Gasperi dealt a final blow to the fiction of the unity of the resistance movement when on Oct. 30 he addressed a convention at which the Christian Democratic Resistance federation was formed in Rome. It incorporated 14 associations and represented more than 50,000 ex-partisans. The country, said De Gasperi, needed a new resistance movement against the forces of disintegration and anti-freedom. The Communist-dominated Associazione Nazionale Partigiani d'Italia, led by Luigi Longo, had split for the first time in 1948, when two rival federations were formed by General Raffaele Cadorna and by Ferruccio Parri.

Germany. It became known during the year that former officers of the German army had created a semi-secret organization called Der Bruderschaft (The Brotherhood) headed by a Bruderrat of three, General Hasso von Manteuffel former commander of the armoured corps Grossdeutschland, Lieut. Colonel Helmut Beck-Broichsitter, who was Manteuffel's chief of staff, and Alfred Francke-Griecksch, a former S.S. colonel. There was also an executive committee or senate and in every German *Land,* apparently also in the Soviet zone, there was a Landschaft or regional organization.

On April 19, on the Hohen-Syburg hill outside Dortmund, the Stahlhelm, an association of the Nationalist ex-servicemen founded in 1919 by Franz Seldte, was revived by Hans Joachim Gottleben. According to its founder, the new Stahlhelm would not be a militarist or fascist clique, but would endeavour to supply some formula to settle the debates on German rearmament. (X.)

United States. In 1950 all the principal ex-servicemen's organizations of the United States were amending their constitutions so as to make the veterans of the Korean war eligible for membership.

American Legion. In 1950 the legion had a membership of about three million. At its convention in Los Angeles it selected Erle V. Cocke, Jr., of Georgia as its national commander. The programme for 1950-51 adopted at the convention placed great emphasis on national preparedness. During 1950 the legion took the lead in organizing the All-American Conference against Communism. Ninety national organizations were invited to the organizing conference.

Veterans of Foreign Wars. This organization, with a million members, was the second largest ex-servicemen's group. At the 1950 national convention in Chicago, Charles C. Halls of Seattle, Washington, was elected national commander. The convention received nation-wide publicity when a communication from General Douglas MacArthur (*q.v.*) dealing with Formosa was withdrawn at the last moment. The programme adopted at the convention urged

strong defence measures, increased veterans' benefits and anti-Communist legislation, and included heavy attacks on the policy of the Departments of Defence and State.

Disabled American Veterans. The Disabled American Veterans had in 1950 a membership of 150,000. At the national convention, held in San Francisco, Boniface Maile, of Grosse Pointe, Michigan, was elected national commander. The organization continued its policy of being primarily concerned with veterans' benefits, the sole exception being emphatic action by the convention in favour of increased national defence.

American Veterans of World War II. Under the leadership of Harold Russell, the handless star of the film *The Best Years of Our Lives*, membership of "Amvets" increased during 1950 to 100,000. As a result, the 1950 convention at Cleveland, Ohio, amended the organization's constitution to permit Russell to be the first and only commander to serve two terms. The convention adopted a platform which included support of the United Nations, a 100-group air force and a three million man army, and opposition to a federal bonus and to discrimination in housing, education and employment.

American Veterans Committee. The membership of this organization dropped to about 20,000 during 1950, but it nevertheless achieved financial stability. The over-all programme called for support of the United Nations, the European Recovery programme and the North Atlantic treaty; a full civil rights programme; and legislation to aid housing, education and health facilities.

Other Organizations. In addition to the above, other ex-service groups with memberships of more than 10,000 included the Air Forces association, the Catholic War Veterans, the Jewish War Veterans, the Army and Navy union, the Military Order of the Purple Heart, the Marine Corps association and the Regular Veterans association.

(RI. A. B.)

EYE, DISEASES OF THE. Cortisone, a hormone of the adrenal cortex (Compound E), and ACTH, the pituitary adrenocorticotropic hormone, were found to have a profound effect in the control of ocular inflammations. These drugs block the inflammatory and exudative phases of the anaphylactic protein reaction, of the bacterial allergic reaction and of the focal reaction produced by the subcutaneous injection of tuberculin. Cortisone was used topically and systemically while ACTH was administered systemically only. The drugs appeared beneficial in cases of non-granulomatous iritis, sympathetic ophthalmia, tuberculous choroiditis, sclerokeratitis and disciform degeneration of the macula secondary to subretinal haemorrhage. The drugs did not benefit syphilitic interstitial keratitis, retrolental fibroplasia or juvenile Coats's disease.

Additional ocular diabetic changes were reported. Conjunctival aneurysms were studied and divided into two groups: the diabetic type was round, purple, had sharp borders and at times was attached to a vessel; the non-diabetic type was a dilatation of a vein, often seen near areas of inflammation and in old people. The diabetic aneurysms were found in 14% of apparently normal persons and in 55% of the diabetic patients. Aneurysms were found more frequently in diabetic patients with retinopathy than in patients without retinopathy.

Asymmetric exophthalmos was investigated by studying 177 cases and 100 normal persons. The Hertel exophthalmometer was used for all measurements and 22 mm. was established as the upper normal limit and 2·5 mm. or less difference between the two eyes was considered normal. Neoplasms caused the exophthalmos in 44% of the cases, while 25% were attributable to exophthalmic goitre. The amount of asymmetry was not of great value in determining the aetiology of the exophthalmos. However, a high amount of asymmetry favoured a tumour and asymmetry of more than 7 mm. was uncommon in exophthalmic goitre.

Aureomycin, an antibiotic obtained from the mould *Streptomyces aureofaciens*, was tolerated by the eye when used in 0·5% solution of the borate form and in 1·25% solution of the ethylene diamine form. Aureomycin injected into the vitreous produced considerably more damage than penicillin or streptomycin. Locally instilled aureomycin penetrated the normal cornea poorly but penetrated an abraded or inflamed cornea more easily. Systemically administered, the drug became distributed throughout the eye: the more vascular the tissue, the higher the concentration of aureomycin. Aureomycin had a large spectrum of antibiotic activity, including staphylococcal, pneumococcal, streptococcal, influenzal and *Pseudomonas aeruginosa* infections. It also appeared beneficial in epidemic keratoconjunctivitis and trachoma.

The biochemical systems of the eye were studied extensively by a number of workers. The synthesis of glycine into glutathione and then into lens protein was studied by culturing lenses and following the progress of radioactive carbon. The observations suggested that the glutathione and protein of the lens are being continuously synthesized. Spectrophotometric analysis of rabbit and bovine lenses suggested that either cytochrome C is absent or present in quantities less than 20 gammas per gram. The oxygen uptake of the lens was inhibited by cyanide, therefore some enzyme system containing a heavy metal, possibly copper, was postulated.

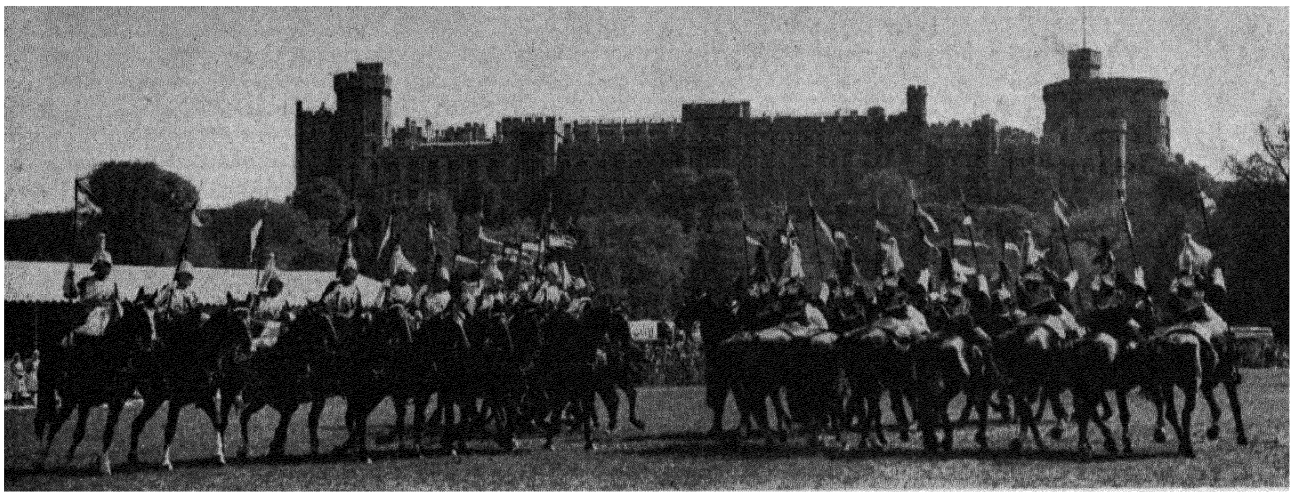
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FAEROE ISLANDS (FAERÖERNE). Self-governing part of the kingdom of Denmark in the north Atlantic situated between Iceland and the Shetland Islands, about 200 mi. N.W. of the latter. Area: 540 sq.mi.; there are 21 islands, excluding small rocks and reefs, of which 18 are inhabited. Pop. (1935 census): 25,744; (1945 census) 29,198. Language: Faeroese, akin to Icelandic rather than to Danish. Religion: Lutheran. The capital is Thorshavn, on the island of Strömö (pop. 1945, 4,390). Governor general, C. A. Vagn-Hansen.

History. Following the dissolution of the Danish Folketing on Aug. 9, 1950, elections were held on the Faeroe Islands on Oct. 15. The two Faeroese seats in the Folketing were won by a representative each of the Social Democratic party and the Sambandsflokkurin, both being in favour of continued Faeroese association with Denmark. The two postwar parties, Folkaflokkurin and Tjodveldisflokkurin, which were favouring an independent Faeroese republic, did not wish to participate in the poll; the representative of the Sambandsflokkurin thus won the seat held by the chairman of the Folkeflokkurin since the election of 1947. On Nov. 8 elections to the Lagtinget, the Faeroese parliament, took place. The results were: Sambandsflokkurin 7 seats, Social Democrats 6, Folkaflokkurin 8, Tjodveldisflokkurin 2 and Sjalvstyrisflokkurin (moderately favouring independence) 2, Sambandsflokkurin and the Social Democrats thus retaining their majority.

Fisheries. Export (1949, metric tons): iced fish 10,660; salted fish 33,200; dried fish 1,100; salted herring 950; whale-oil 1,600; whale-meat 450; fish-oil 1,800. Total value: Kr. 74,200,000.

Industry. Brown coal mined on Rangaboin and Kvalbo provided for the islands' own needs in fuel. Canning factories, wool mills and a small shipyard were working. (H. LN.)



The Household Cavalry performing a musical ride at the Royal Windsor Horse Show, in the Home Park, Windsor, May 1950. In the background is Windsor Castle.

FAIRS, SHOWS AND EXHIBITIONS. **Great Britain.** The year 1950 saw the 29th British Industries fair, again held at Olympia and Earls Court, London, and at Castle Bromwich, Birmingham. There were 3,038 exhibitors; 19,005 overseas visitors, nearly 2,000 more than in 1949; 113,102 home buyers; and 73,540 public visitors. King George, Queen Elizabeth and Queen Mary visited the Earls Court section. To carry visitors from London to Birmingham a helicopter service was run, the first scheduled helicopter service for passengers in Europe. The two motor shows, the Commercial Motor show and the Motor show were both held at Earls Court. The first British Food fair under the auspices of the Food Manufacturers' federation was held at Olympia from Aug. 29 to Sept. 9. The Industrial Finishes exhibition, the first of its kind, was held at Earls Court from Aug. 30 to Sept. 7. Two regular exhibitions were again held in 1950: the *Daily Mail* Ideal Homes exhibition at Olympia and the annual display of the Society of British Aircraft Constructors at Farnborough.

Agricultural Shows. In 1950 many agricultural shows suffered badly from the wet weather and this severely restricted attendances at a number of them. Many societies thus reported losses for the first time for many years. The show of the Royal Agricultural Society of England was held in July at Kidlington airfield near Oxford. The total attendance for the four days was 122,236 (186,678 at Shrewsbury in 1949). The first annual show of the society at Oxford in 1839 occupied 7 ac.: the 1950 show occupied 105 ac. In 1839 there were 213 livestock entries and 54 agricultural implements: in 1950 there were 5,847 livestock entries and 700 trade stands. The president of the society in 1950 was Princess Mary, the Princess Royal.

The Royal Norfolk Agricultural show was held at Anmer park on the royal estate at Sandringham. The total livestock entry of 1,951 was a record. In two days the attendance was 69,872. The King's group of red poll cattle won the King's Lynn cup, which was presented to him by the Queen. Malton was the scene of the Great Yorkshire show and there the red poll cattle of the Princess Royal won in four classes. The Royal Counties show was merged for 1950 with the Sussex County show and the combined show was held at the seaside resort of Bognor Regis, Sussex; the attendance was 64,223, about 4,000 fewer than when the Royal Counties show was held at Reading in 1949. The Bath and West and Southern Counties show held at Castle Bromwich had only 72,207 visitors in 1950, (122,000 at Bristol in 1949 and 162,000 at Cardiff in 1948). The estimated loss was over £15,000. It had been expected that the attendance at Birmingham would have been 250,000.

The Royal Lancashire show at Bolton was another where rain restricted the number of visitors. Rain before the opening had turned the 100-ac. ground into a quagmire but sunshine soon improved conditions. Entries were 1,000 fewer than in 1949. The Royal Welsh show was held at Abergele and the Three Counties show at Leominster for the first time since 1909. More than 800 entries were cancelled for the Northamptonshire show at Overstone because of foot-and-mouth disease.

Canada. The third international trade fair was held at Toronto in May. For the first time Australia, France, Spain and Germany were represented and because of the increasing interest in the fair 40% more display space was provided than in 1949. Nearly half the space was occupied by British exhibits.

Finland. The fourth of a series of great national fairs was held from Sept. 30 to Oct. 15, the first three having been held in 1925, 1930 and 1935. A new exhibition hall was built and almost the whole of Finnish industry was represented.

France. Among the important exhibitions in France were the international fairs at Lyons in April and at Paris in May and the motor and cycle shows in Paris.

Germany. The two important spring shows in Germany again gave signs of their importance to European trade. The Leipzig fair attracted 7,500 exhibits, 750 of which were from Western Germany, making the fair the largest there since World War II. An entire pavilion was devoted to products of the U.S.S.R. There were 4,000 exhibitors at the Frankfurt fair in Western Germany later in the same month.

Italy. The traditional Milan fair and Fiera del Levante at Bari were well supported. More than 40 countries took part at Milan in April including many eastern European states. The U.S.S.R. was not represented because of a disagreement on the allocation of space. An official British stand, " Britain through her Publications," attracted attention as did another British exhibit of colour television.

United States. The first U.S. Trade fair was held at the Hall of Nations, Chicago, from Aug. 7-20. Forty-seven nations took part, including all the 18 member nations of the Organization for European Economic Co-operation; more than 300,000 visitors attended the fair. In April the British motor, motor cycle and cycle manufacturers put on a show of their products at the Grand Central Palace in New York: this was the first all-British motor exhibition in the U.S. and proved very popular.

FALKLAND ISLANDS. British colony and dependencies. The colony consists of two main islands, East and West Falkland, and about 200 smaller islands in the south Atlantic. Dependencies: (1) South Georgia (four whaling stations) with South Orkney and South Sandwich and (2) South Shetland and Graham Land. Area of colony 4,618 sq.mi.; pop. (1948) 2,268, white, almost all of British descent, predominantly Protestant. Capital and only town, Stanley (*c.* 1,200). Administration: governor; executive council, 3 *ex officio* and 3 nominated members; Legislative Council, 3 *ex officio*, 5 nominated (2 unofficial and 3 official) and 4 elected members. Governor, Sir G. Miles Clifford.

History. The Colonial Development corporation's two projects for a sealing industry and for establishing a freezing plant for mutton were the most important developments in the Falkland Islands in 1950, though the phenomenal rise in the world wool prices also promised increased prosperity for the farming industry. In May two Auster aircraft purchased by the government were put into service, and since there were no roads outside Stanley the people living on the settlements had for the first time an alternative means of transport to the horse. A new town hall was opened in Stanley to replace the original building destroyed by fire in 1944. The hall, with its ballroom, stage, museum and library had always been the centre of the community's social life.

On two occasions the Argentine government pursued its century-old claim to the Falklands, first by a resolution in the Senate reaffirming the claim, and subsequently by applying Argentine internal telegraph rates on messages sent to the Falklands and their dependencies. The Falkland Islands Dependencies survey continued its work in the Antarctic, the base at Stonington island being relieved on Feb. 10 after two years by the supply ship "John Biscoe." (*See* also ANTARCTICA.)

Finance and Trade. Currency: pound sterling. Budget (est. 1950): colony, revenue £189,725 and expenditure £186,734; dependencies, revenue £129,806 and expenditure £102,864. Foreign Trade (1949): imports £295,467; exports, incl. re-exports, £428,946. Principal exports: wool, tallow and whale oil (dependencies). (K. G. B.)

FAROUK I, King of Egypt (b. Cairo, Feb. 11, 1920), the only son and eldest child of King Fuad I, and the great-great-grandson of Mohammed Ali, founder of the dynasty. In 1935, as Prince Said, he was sent to England to complete his studies and while there represented his country at the funeral of King George V. His father's death on April 28, 1936, prevented his proceeding to the Royal Military academy, Woolwich, and he returned to Egypt, where a regency council acted for him until his coming of age on July 29, 1937, when he was invested as king in the parliament building. On Jan. 20, 1938, he married Farida, daughter of Zulfikar Pasha; three daughters were born and on Nov. 17, 1948, the marriage was dissolved. Addressing the Arab League council on Oct. 30, 1949, he pointed out that there was still an empty seat at their table—that of Palestine. In Jan. 1950 the king and Nahas Pasha (*q.v.*) appeared to have shelved the once bitter feud between the palace and the Wafd. On Jan. 28, Ernest Bevin, returning to London from Colombo, met King Farouk; the Duke of Edinburgh and Admiral Sir Arthur Power, commander in chief, Mediterranean fleet, also called on him. On March 12, on their way by air to Kenya, the Duke and Duchess of Gloucester visited King Farouk at Kubba palace: the king was informed on this occasion that King George had appointed him an honorary general in the British army. On April 4 King Farouk received General Sir John Crocker, Air Marshal Sir John Baker and Rear Admiral I. M. R. Campbell, commanders of the British land, air and naval forces in the middle east. On June 4 he received Field Marshal Sir William Slim, chief of the imperial general staff. On May 16 he annulled the marriage of his 19-year-old sister Princess Fathia to Riad Ghali, a 31-year-old Coptic Christian; he suspended her guardianship by his mother, Queen Nazli, and ordered the sequestration of all their property. Queen Nazli he commanded to return to Egypt. Riad Ghali having become a Moslem, Princess Fathia went through a Moslem marriage ceremony with him at San Francisco on May 25, but this marriage also was annulled by the king on July 31. He, however, forgave his other sister, Princess Faika, aged 23, who in April 1950, at San Francisco, married Fuad Sadek, a Moslem. At her brother's command she returned to Egypt. From Aug. 10 to Oct. 19 King Farouk went on holiday in France, Spain and Italy, visiting Deauville, Biarritz, San Sebastian and San Remo. On Nov. 16, in a speech from the throne, he asked for the evacuation of British troops and the unification of the Nile valley under the Egyptian crown (*see* EGYPT).

FASHION AND DRESS. The first years after World War II might be regarded by fashion historians as a period of transition, a period of groping after the lines into which fashion would settle for an 8-yr. or 10-yr. span. The year 1950 could be seen as continuing the transition. Fashion remained deliberately fluid, throwing out feelers in all directions, rather like the squid whose tentacles wave softly till they find something to fasten on, when they all swing one way and harden like iron. So in the spring of 1950 more



A 1950 dress by Grès showing the sheath-plus. The sheath is of black tulle and the sweeping hip bow of striped organdie.

feelers were cast in the direction of the 1920s, especially by Hardy Amies in London, who showed suits with straight unbelted hip-hugging jackets over straight skirts. In Paris, too, Dior launched a " vertical line ": sheath dresses whose narrow straightness was emphasized by fine pleating or tucking, or by narrow ribbon bands running from neck to hem. Sheath dresses, indeed, prevailed for day and evening but, characteristic of a tentative transition period, most of them came under the phrase " the sheath—plus." That is to say, the basis was a figure-fitting sheath, but only in certain instances was this left in a simple, uncompromising form. In general, the narrow line was broken by a jutting sash, a hip bow, an apron skirt, a floating scarf or, for evening, draped complications at hip level.

Another trick for taking the eye off the sheath skirt was the use of transparent fabrics for overskirts and for coats. Simple tailored coats in chiffon, lace and organdie floated over narrow summer dresses. Loose coats in thin silk were worn over suits, and the prettiest evening coats were those which added no whit of extra warmth but floated with the transparent buoyancy of balloons over narrow or crinoline evening dresses.

Although the straight hip-hugging jacket did not seem to make much headway in its extreme form, modified versions of the same feeling were seen in the prevalence of low buttoning and low-placed pockets. Many suits were open to the waist, and buttoned importantly below it. Revers became almost waist-length, leaving a horse-shoe opening over a blouse. In the spring Dior first showed a dress slim to the knees and then breaking into pleats which developed by the autumn into the full flare of the trumpet skirt. This, in day and evening versions, swung in heavy pleats or stiffened flares, from knee-level, below the simplest of sheaths. When skirts remained narrow, as did the majority, jackets took to flaring out above them from a once-more nipped in waist, and tunics with bell-shaped peplums cut across their pencil straightness at mid-thigh level.

In the meantime the vertical look of spring had changed its slant and became a strongly diagonal look by the autumn. Pleating and tucking, seaming and buttoning, wrap-overs and scarves, all took this diagonal slant. Scarves swelled during 1950 into the proportions of a stole, often a stole so big that it was a wrap in itself. By day, collars had scarf ends that slanted diagonally across the bodice to be pulled through a belt. Stoles a yard wide and three yards long had their great bulk wrapped around the shoulders of suits, or hung from the neck like jacket fronts, ending in deep pockets. By night, stoles to match or contrast with the dress fell to the hem, while others ended in fur cuffs or in gloves which held them across the shoulders. The summer's billowing look of transparent fabrics found solid expression in the most memorable clothes of Balenciaga's memorable autumn collection, in which taffeta appeared to have been blown up into pumpkin skirts and vegetable-marrow sleeves.

By autumn the box jacket had curved into the short barrel coat, cut away in front. " Little top-coats " became an important fashion feature. Anywhere from hip to seven-eighths length, they were more than jackets, less than full-scale coats. Some were belted and flared in a tunic line; others had a barrel curve; others hung straight almost to the knees; others swung loose. Of the full-length coats, the newest in line were the straight and narrow, sometimes held by a single, off-centre buttoning, sometimes double-breasted. Important double-breasted buttoning was, indeed, also seen on the skirts as well as the bodices of suits and dresses; altogether there was a great impression of plain tailored buttons being lavishly used on all types of day clothes to emphasize the line.

Fur trimmings were used more frequently than at any



A dress in white guipure lace with black accessories—shown by Hardy Amies in 1950.

period since prewar times but happily with more taste and restraint than has often been the case. Deep fur cuffs would be the only fur touch on a cloth coat; the collar would be small and tailored. By contrast, a coat with cossack collar in astrakhan would have plain un-cuffed sleeves. Fur linings, often showing themselves in turn back revers, bulked "little top-coats." Linings attracted a great deal of notice to themselves. The many reversible fabrics demanded a handling that would display both their sides and not only jackets but skirts and sleeves were slit to show contrasting linings; sober coats of black, brown and grey swung open to reveal brilliant interiors.

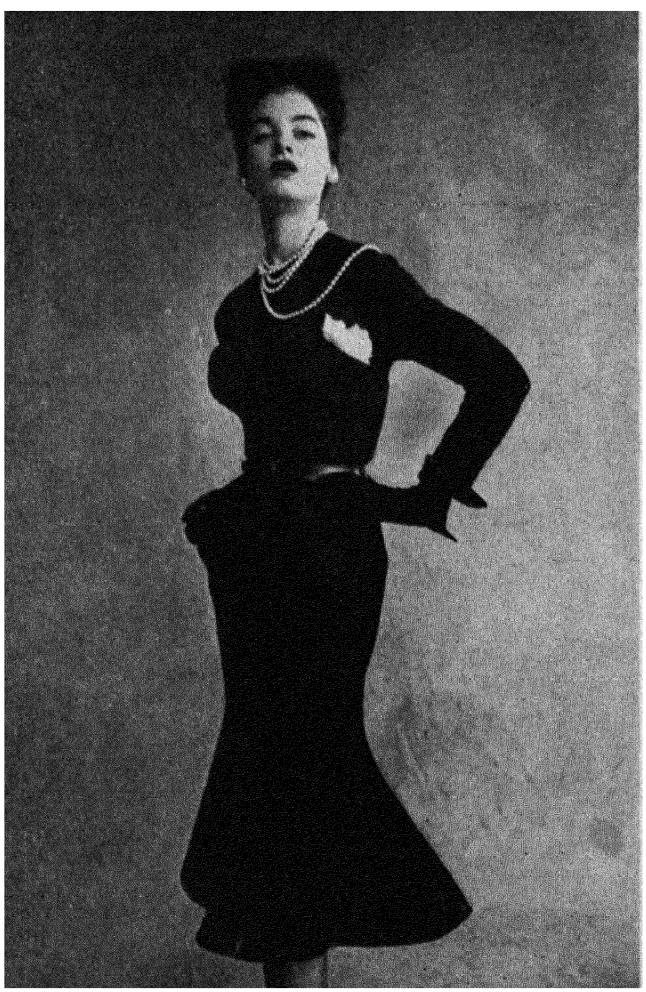
In colours, 1950 was chiefly notable for the return of orange after a virtual absence of some 20 years and for the prevalence of white. Small notes of orange had been struck for a season or two previously but early in the year it came out with full force for whole outfits, for hats and for accessory touches. One of the most difficult of colours for the majority of women, its pinkish tinge, tending towards apricot, was the most popular, because the most becoming. For autumn, its influence was felt in a whole range of " hot browns," the gingers, tans and chestnuts. In the spring there was a flurry of white in the form of collars, cuffs, gilets, linings. More significant, there were quantities of white coats, white suits, white dresses, pointed up with black accessories—instead of the customary reverse proceeding. A white linen suit became the smartest wear for Henley or Wimbledon; a white silk or coarse lace dress for Ascot; and not only debutantes but their mothers wore white ball dresses. Blues were strongly in evidence, especially turquoise and the mauve-blues, shading into lavender and purple. The grey-beige-oatmeal neutrals held their ground throughout the summer; and the favourite strong colour notes were red (from orange to crimson) and yellow.

Fabrics developed rough surfaces and a deep pile. Bouclé and open-weaves were seen after a long succession of smooth and close-weave woollens. Coat fabrics became immensely

thick, so that full skirts swung heavily and straight skirts hung in a plumb-line. In the lighter-weight fabrics slub weaves were seen. At the other end of the scale came the transparent fabrics already mentioned, with lace, especially coarse lace, making a return for day as well as evening. Velvet won the winter honours: velvet collars and cuffs, velvet blouses and waistcoats, velvet trumpet flares on skirts, velvet accessories, and entire velvet suits and dresses.

Hats remained small, except for a sudden crop of wide-brimmed hats which came out with formal summer dresses. After seasons of sitting on the backs of heads, hats began to move forward and the gap left at the nape was filled by rather longer, softer hair styles and especially by chignons. In make-up, the heightened naturalness of warm skin tone and clear red lips began to give place, late in the year, to an all-over creamy pallor, with dark red lips the only accent, another echo-with-a-difference of the scarlet-lipped white mask of the 'twenties. Many evening shoes consisted of little except soles, high heels, and the thinnest of straps—though covered, pointed toes began to be seen. In costume jewellery, rhinestones invaded the field so long occupied by pearls, slave bracelets set off the arms left frequently sleeveless by blouses and day dresses, and huge cabochon brooches of jewel-coloured, single-toned stones were worn on caps and on cuffs, as well as more conventionally.

There was a sad loss to fashion during 1950; Captain Edward Molyneux, long famous for the elegant simplicity of his clothes, retired from fashion designing because of ill-health. (A. Ws.)



The corselette bodice and trumpet skirt in black wool by Dior—a distinctive fashion in 1950.

Men's Fashions. In 1950 there was a return to almost Edwardian formality in men's clothes. In suits, the style veered sharply from the full, built-up models of the immediate postwar era to garments which followed the natural line. Jackets were longer and were made to fit the shoulders, instead of being padded into an artificial line; the lapels became narrower and the trousers took on a tapering look with less width at the bottoms. Several style leaders decided to dispense with trouser turn-ups altogether.

The vogue for single-breasted jackets revived interest in waistcoats, which, in three-piece suits, were cut high and often had narrow lapels. Contrasting-coloured waistcoats with brass or leather buttons were increasingly worn with business suits. The single-breasted trend was also seen in overcoats, which became shorter and were often adorned with velvet cuffs and collars. More sombre colours, such as dark grey and black, were favoured.

The year marked the centenary of the bowler hat, which was originally made at the instigation of William Coke of Norfolk who, irritated by the top hat because it caught in trees when worn for hunting, thought a small, hard, round hat would be more serviceable. The centenary year saw a big revival of bowler hat wearing for business, which, with the tightly rolled umbrella and leather shoes, was a further indication of the trend back to formality. The general tendency towards neatness was further reflected in shirts, socks and ties. In shirts, neat stripe effects returned to favour and these were worn with high, stiff white collars.

In sports clothes, however, brighter, easy-fitting styles predominated but the tendency was towards neatness, not sloppiness. Sports suits in new shades of gaberdine and hopsack weaves took the place of grey flannel trousers and tweed sports coat and lightweight caps became increasingly popular.

For evening wear, the tail-coat came back into its own for more formal occasions, while both single- and double-breasted dinner jackets were seen in a variety of new styles. The popularity of evening wear was enhanced by the introduction of utility dinner suits. (R. J. My.)

FATS: *see* Vegetable Oils and Animal Fats.

FAULKNER, WILLIAM, American novelist (b. New Albany, Mississippi, Sept. 25, 1897), attended high school at Oxford, Mississippi, and after serving with the Royal Air Force during World War I he returned to Oxford to attend the University of Mississippi. He served for a time as a newspaper reporter in New Orleans and subsequently remained in Oxford, leaving only for such rare trips as one he made to Europe, a few to Hollywood to supervise the filming of his novels, and visits to his publishers in New York. His works were perhaps least known in the Deep South about which he so often wrote. They include *Sanctuary*, *The Marble Faun*, *As I Lay Dying*, *Sartoris*, *Go Down Moses*, *The Hamlet*, *Light in August*, *Absalom*, *Absolom!* and *Intruder in the Dust*. In Nov. 1950, Faulkner was awarded the Nobel prize for literature which had been held over from 1949.

FEDERAL RESERVE SYSTEM. Early in 1950 the reserve system began to make long-term bonds available to the market from its portfolio and during the first six months of 1950 federal reserve holdings of restricted treasury bonds declined by $1,400 million.

On Aug. 18 the board of governors approved an increase in the discount rate of the Federal Reserve Bank of New York from 1·50% to 1·75%. Discount rates were subsequently raised at all other reserve banks as well, in order to discourage borrowing by member banks of additional reserves to support further credit expansion. At the same time,

the treasury announced a short-term refunding of about $13,600 million of securities maturing in September and October at terms somewhat less attractive than were then available on outstanding issues of comparable maturities.

Under authority of the Defence Production act of 1950, the board of governors reissued Regulation W, controlling consumer credit, effective on Sept. 18. The regulation, which was tightened on Oct. 11, covered motor car instalment credits up to $5,000 and other credits up to $2,500. Down payments of at least 33⅓% on motor cars, 25% on appliances and 15% on furniture and maximum maturities of 15 months were fixed.

Effective Oct. 12, the board of governors issued Regulation X, which established credit restrictions on conventional housing loans, with the concurrence of the administrator of the Housing and Home Finance agency. Companion restrictions on government-aided housing finance, on a basis conforming to those applied to other types of private credit, were announced by the administrator. The regulations called for down payments ranging from 10% in the $5,000 and less price range to 50% at $25,000 and more, with preference for veterans amounting in most cases to 10 percentage points.

Effective Sept. 27, the board of governors inaugurated a programme of guaranteed loans to facilitate the defence effort. Regulation V set forth the procedure and terms for such loans, whereby the federal reserve banks act as fiscal agents in connection with production loans guaranteed by the departments of the army, the navy and the air force and by other government procurement agencies.

On Dec. 29 the board of governors announced a general increase in reserve requirements on both net demand deposits and time deposits and for all classes of member banks, effective at various dates in Jan. 1951. The effect of this increase was to raise the required reserves of member banks by a total of about $2,000 million. (*See* also BANKING; CONSUMER CREDIT.) (J. K. L.)

FENCING. Fencing was included for the first time in the Empire Games (*q.v.*) at Auckland, New Zealand, in Feb. 1950. Five nations were represented. In the team events England won the foil and sabre and Australia was successful at épée. England made a clean sweep of the individual events; the individual empire champions were: Mrs. M. Glen Haig (ladies' foil), René Paul (men's foil), C.-L. de Beaumont (épée), and A. G. Pilbrow (sabre). During the games a British Empire Fencing federation was founded, the president for the next four years being C.-L. de Beaumont, England.

The world championships were held at Monaco in July. Italy again won all three men's team events and France won the ladies' team events. In the ladies' individual event a tie between E. Muller-Preiss, Austria, the holder, and Renée Garillhe, France, could not be completed owing to an injury to the former and they were placed equal first. Renzo Nostini won the men's foil title for Italy and Jean Levavasseur, France, won the sabres. M. Luchow, Denmark, was the winner at épée.

In Britain there had been a considerable expansion of the regional organization of the Amateur Fencing association and there were in 1950 more than 100 certificated leaders and section coaches. The British amateur champions were: Mrs. M. Glen Haig (ladies' foil), René Paul (men's foil), Dr. R. Parfitt (épée) and A. G. Pilbrow (sabre).

(C. -L. de B.)

FERTILIZERS. The consumption of fertilizers in the United Kingdom increased to record levels in 1949-50 (*see* Table I). For nitrogen this represented the first big step forward since 1941-42. The fertilizer subsidy in 1948-49

TABLE I. CONSUMPTION OF FERTILIZERS, UNITED KINGDOM, 1949-50*
(in tons of plant food)

	Nitrogen (N)	Phosphoric acid (P_2O_5)	Potash (K_2O)
1938-39 . .	60,000	170,000	75,000
1944-45 . .	172,000	346,000	116,000
1948-49 . .	185,000	419,000	196,000
1949-50 . .	225,000	460,000	238,000

* Actual distributions by the main suppliers. These may have appreciably exceeded the quantities used as many merchants and farmers bought stocks to take full advantage of the subsidy.

amounted to £12,250,000, but one-half of this was removed on July 1, 1950, and the other half was to be removed on July 1, 1951. Some typical price increases on July 1, 1950, showing the difference between 1948-49 and 1949-50 prices at the completion of the period, are given in Table II.

In view of the reduction, and eventual withdrawal, of the fertilizer subsidy, schemes were announced early in 1950 to encourage by acreage grants the use of fertilizers for improving grassland and marginal land. Grants up to 25*s.* per ac., at the rate of one-third of the actual expenditure, would be made for fertilizers applied to grass, rough grazing and marginal land; grants up to £3 per ac., at the rate of two-thirds of actual expenditure, was offered for fertilizers applied after ploughing up permanent grass of at least seven years standing. A slightly different scheme applied in Scotland.

TABLE II. FERTILIZER PRICES IN GREAT BRITAIN*

	Nitrogen content	Phosphoric acid content	Potash content	Price per ton 1948-49 £ *s. d.*	Price per ton 1949-50 £ *s. d.*
Sulphate of ammonia . .	20·6%	—	—	10 8 0	12 18 6
Superphosphate .	—	18%	—	5 19 0	7 19 0
Muriate of potash	—	—	50%	11 10 0	13 11 9
Ground phosphate rock . .	—	26%	—	5 6 6	6 8 6
Basic slag . .	—	18%	—	3 15 6	6 2 0
National compound No. 1 . .	7%	7%	10·5%	10 14 6	13 17 9
Concentrated compound No. 1 .	12%	12%	15%	16 13 6	20 14 0

* Prices per ton for 6-ton lots, delivered to nearest station, March to June; muriate of potash quoted at importer's stores.

Figures published during the year and summarized in Table III showed that the Commonwealth production of nitrogen and phosphate fertilizers had increased considerably between 1938-39 and 1948-49 (see *34th Report of the Commonwealth Economic Committee*, H.M.S.O., London, Oct. 1950). In view of the absence of other supplies of potash in the Commonwealth the results of prospecting by deep bores in northeast Yorkshire were awaited with interest. The production of fertilizers in Europe (excluding the U.S.S.R.) had returned to its prewar level by 1948-49. The outstanding changes were in North America, mainly in the United States where in the ten-year interval fertilizer production increased five times for nitrogen, three times for phosphate and three-and-a-half times for potassium.

TABLE III. ESTIMATED FERTILIZERS PRODUCTION 1938-39 AND 1948-49
(in thousands of tons of plant food)

	Nitrogen		Phosphoric acid		Potash	
	1938-39	1948-49	1938-39	1948-49	1938-39	1948-49
Commonwealth	180	470	510	940	—	—
Europe .	1,630	1,520	2,130	2,330	2,430	2,240
N. and Central America	280	1,130	640	1,960	280	950
World total (excl. U.S.S.R.)	2,530	3,260	3,500	5,050	2,760	3,200

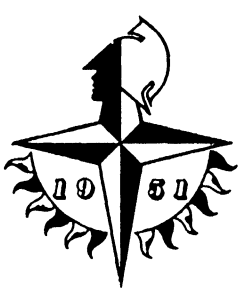
A serious situation arose during 1950 through drastic cuts in the export of raw or elemental sulphur (brimstone) from the U.S. A ton of superphosphate requires 11 cwt. of



sulphuric acid containing the equivalent of nearly 2 cwt. of sulphur. The demand for sulphuric acid continued to increase, and in latter years most of the new plants had been based on brimstone imported from the U.S. in place of pyrites. The U.S. production of raw sulphur increased from 2·4 million tons in 1938 to 4·9 million tons in 1948. Latterly stocks had fallen heavily. Uneasiness about the possible depletion of known reserves became acute after the Korean war had started. In several countries fertilizer manufacturers had to find new sources of raw materials for sulphuric acid or consider alternatives to superphosphate. Some progress was made in using nitric acid in place of sulphuric acid and in developing various high-temperature methods for making phosphate fertilizers. Both kinds of process yielded novel products which had not yet been adequately tested over a range of agricultural conditions.

Promising trials were made in New Zealand in applying superphosphate by aeroplanes to pastures in difficult hill country. In preliminary tests with obsolete and inefficient aircraft with a relatively small load operating over considerable distances, the average cost of transporting and distributing 2 cwt. granular superphosphate per ac. at an average distance of 18 mi. was 15*s*. Using efficient modern freight aircraft it was estimated that this cost could be reduced to between 6*s*. and 10*s*. and that large inaccessible blocks of hill country could thus be improved. Preliminary trials were carried out on Plynlymon, in Wales, in 1950 by the Bristol Aeroplane company (see *Farmers' Weekly*, Sept. 8 and 15, 1950). (E. M. C.)

FESTIVAL OF BRITAIN, 1951. In Dec. 1947 Herbert Morrison announced in the House of Commons that the government had decided to mark the centenary of the Great Exhibition of 1851 with a Festival in the summer of 1951. The sum of £11,300,000 had been voted for the purpose, but the actual total cost was not expected to exceed £9 million.



The Festival of Britain organization consisted of a festival council and an executive committee, with General Lord Ismay as chairman of the council and Gerald Barry as director general presiding over the committee, on which were represented the Arts Council of Great Britain (*q.v.*), the Council of Industrial Design and the British Film Institute, as well as two specially appointed bodies, a Council of Science and Technology and a Council for Architecture, Town Planning and Building Research. In addition special committees had been set up for Scotland, Wales and Northern Ireland.

Planned as a nation-wide celebration, this festival was to be on a more comprehensive scale than any similar celebration. Its purpose, apart from marking the 1851 centenary, was to demonstrate Britain's contribution to civilization, to stimulate trade and to encourage creative effort in the British national life.

In London there were to be four main exhibitions as well as the festival pleasure gardens in Battersea park. The principal exhibition was that on the south bank of the Thames between Waterloo and Westminster bridges. At the end of 1950 the buildings here were nearly completed. Display work was being carried out in many of the pavilions in this 30-ac. site ready for an exhibition which would develop the theme of how advances in the fields of science, technology and industrial design had resulted from a combination of the qualities of the people and the natural resources of the land. The site was divided into two sequences by Hungerford railway bridge; the upstream section was dominated by the Dome of Discovery, 365 ft. in diameter and the largest dome in the world, and the downstream section by the Royal Festival hall. This London County Council concert hall would be the only permanent building on the site.

The King and Queen visiting the site of the Festival of Britain in May 1950. On the Queen's right is J. W. Bowen, chairman of the London County Council.



An example of "Festival," a type designed in 1950 for use in publicity material for the Festival of Britain.

A few miles down river at Lansbury, in the Stepney-Poplar area, part of the L.C.C.'s great re-development scheme was to form an architectural exhibition. There some 1,500 people were being rehoused and new inns, churches, schools and a market-place were to be on show. Two travelling exhibitions, one mounted on the converted escort aircraft carrier "Campania," the other on 100 lorries were being prepared to travel to the ports and towns of Britain.

Contemporary art was being fully sponsored by the Arts Council of Great Britain. Sculpture, music and ballet had been commissioned and prizes offered for painting, music, drama and poetry. For May and June 1951 the London Season of the Arts had been organized to offer the finest possible entertainment and throughout the country 23 festivals of the arts were to be held. It was part of the festival plan that towns and villages all over the country should celebrate the festival, and that something of lasting value should remain in each locality. By the end of Nov. 1950 over 1,000 local authorities had notified the festival organization of their proposed plans. (X.)

FESTIVALS. The summer scene in Britain had come to be regularly graced with four major festivals of the arts and in 1950 these provided the lover of music and drama, of painting and of the spoken word, with an opportunity of enriching experience or at least of congenial leisure in elegant surroundings in any month from May to October. The Bath Assembly, the third of its kind since the war but deriving from the days of Beau Nash, opened in May. An attempt was made to recapture the city's golden age. Its 18th-century crescents, squares, octagons and circuses, a permanent amenity, were supplemented by costumes of the period worn by drama students in and out of the Pump Room and by lavish displays of flags and flowers. The verdict of the critics was, however, that the assembly had been, on the whole, more successful with the trappings than with the spirit. True, the presentation of Vanbrugh's *The Provok'd Wife* was in the proper key and so was the choice of the neighbouring Bristol "Old Vic" to play it. Short operas were given in the delightful little Theatre Royal and concerts elsewhere by Sir Thomas Beecham, Sir John Barbirolli, George Weldon and Rudolf Schwarz.

In June the now well-established festival at Aldeburgh, a small seatown in eastern England had its characteristic and economically achieved success. This is the country of Benjamin Britten, and this, with the support of his friends, notably the Earl of Harewood, is his festival. Britten's version of Gay's *Beggar's Opera* was played. His *Let's Make an Opera* was revived. The first public performance of his anthem written for Lord Harewood's wedding was given. He conducted a Mozart concert from the keyboard. The inventive organizers even arranged a song recital by the

Lady Margaret singers on the river Meare, the performers being placed on a floating platform and the audience surrounding them in boats.

Cheltenham, in July, lived up to its reputation of providing more new music, most of it British, than any similar celebration. Sir John Barbirolli was once again the presiding genius and among those who had works performed for the first time were William Alwyn, Sir Arnold Bax (a concertante for the left hand written for Harriet Cohen (*q.v.*) after she had injured her right), Collins, Brian Easdale, Fricker (a symphony in the contemporary idiom described as of the highest promise) and Edmund Rubbra (*Piano Trio, Opus 68*, with great mystical feeling).

Edinburgh, in August and September, achieved a greater comprehensiveness than in any of the three preceding years. British, French, Danish and Italian orchestras took part and the ovation given V. de Sabata after he had conducted the chorus and orchestra of La Scala, Milan, in Verdi's *Requiem* was one of the most remarkable in living memory. The Glyndebourne opera with Beecham and a galaxy of solo artists of the highest standing gave music first place in the festival. The four principal plays included a new piece by each of Scotland's foremost dramatists, James Bridie and Eric Linklater, a first revival for many generations of Ben Jonson's *Bartholomew Fair*, and the 18th-century Gothic tragedy, *Douglas*, by the Rev. William Home. The programme reached a tremendous climax when Handel's *Firework Music* was played by massed bands, to full pyrotechnic accompaniment on the castle esplanade.

The festival season came to a gentle and exquisite close in October when Bath mounted a Bach festival which was acclaimed the noblest tribute to him in the year of the bicentenary of his death. The rendering of the *St. Matthew Passion* in the abbey by Cuthbert Bates was generally acknowledged to be one of the musical events of the year. (X.)

FIELD SPORTS. After the 1949 shooting season there was a very fair breeding stock of game throughout Great Britain. Partridges, in particular, promised well; and with the removal of the ban imposed in 1940 on the rearing of pheasants, although the provision of proper foodstuffs still presented difficulties, there were reasonable hopes that, if the breeding season was favourable, sport in the autumn of 1950 would be good. But bad weather in April resulted in the loss of many wild pheasants' nests, though later broods and second clutches fared better. Partridges were more fortunate with the weather: very nice broods were brought off and prospects were excellent, especially in East Anglia. Though torrential rains in July resulted in heavy losses of young birds, partridges were better than for some years. Grouse were mostly plentiful, but the weather was bad for shooting. There were no reports of disease, but there was concern lest too large a stock had been left.

The 1949-50 hunting season was, as a whole, open and resembled the previous one in that, although many were enjoyed, few hunts made history. Among the best was that from Hanger wood in the Duke of Beaufort's country, when hounds ran for 2 hr. 10 min. with an 8½ mi. point. The Portman had an extraordinarily good season, accounting for 51½ brace of foxes. Followers of the Zetland witnessed a sight which had not been seen for years: a fox swimming right across the Tees. Among the foot packs, the Ullswater had a record season, accounting for 93 old foxes.

Of the beagle packs, probably the New Forest had the most consistently successful season with several excellent days, notably on Christmas eve from Hale Purlieu. Otter hunting packs had a reasonably good season: the difficult conditions created by World War II had almost disappeared, especially in the rivers hunted by the Crowhurst.

Anglers found in 1950 a good year for salmon: heavy rains provided plenty of water for both spring and autumn salmon-runs (the only protracted spell of low water was in June and July); and weight and condition catches were above the average. Pollution in England and Wales and commercial-scale poaching in Scotland still threatened many salmon rivers; and this poaching would probably defy all efforts to stop it unless the law were altered and penalties increased, as was recommended by a government committee which examined the matter. Abnormal rainfall made trout-fishing unpleasant over long periods: rivers ran high and coloured for weeks at a time; and on some dry-fly streams sport ended in early July. Coarse-fish anglers had a good year, because of the mild weather.

On all types of water the restocking and conservation, not only of fish but of amenities, remained an urgent need; and the public responsibility for this was handed over by the fishery boards to the newly-constituted river boards. (L. V. D.)

FIJI. British colony. About 250 islands, rocks and reefs in the Pacific ocean, the principal being Viti Levu (4,011 sq.mi.) and Vanua Levu (2,137 sq.mi.). Total area: 7,040 sq.mi. Pop.: (1946 census) 259,638, (1948 est.) 277,372, including 123,995 Fijians (Polynesian by race), 129,761 Indians and 6,159 Europeans. Religion: Fijians are Christian (mainly Methodist); Indians, about 88% Hindu and 12% Moslem. Capital: Suva, on Viti Levu (European pop. 2,266 in 1946). Administration: governor; executive council; Legislative Council, 3 *ex officio* members, not more than 13 nominated official members, 5 Fijians (nominated), 5 Indians (incl. 3 elected) and 5 Europeans (incl. 3 elected). Governor, Sir Leslie Brian Freeston.

History. The most important event of 1950 was the first meeting of the South Pacific conference, held at Suva in April (*see* SOUTH PACIFIC COMMISSION.) In February the Legislative Council considered the report of a constitution revision committee and decided against any important constitutional changes. This decision was taken by the



Two Fijian students of the Queen Victoria school, Matavatucou, Tai Levu, beside the foundation stone laid on July 19, 1950.

unofficial members only, the officials abstaining from voting. The first governor was appointed to Fiji in 1875, and he established a system of indirect rule for the Fijians under which they have successfully administered their own affairs since. This anniversary was marked by the appointment of Rata Sir Lala Sukuna, secretary for Fijian affairs, as an adviser on colonial questions to the British delegation to the United Nations general assembly in New York in the autumn. The people of Fiji subscribed over £57,000 for a War Memorial Anti-Tuberculosis fund, to which the government added £20,000. A colonial development grant of £25,800 was also available for this work, and the campaign had already started. There had been 486 cases in 1947 and 120 deaths in 1948. A ten-year development plan was approved costing £4,500,000 with emphasis on hydro-electric and road development.

Finance and Trade. Currency: Fijian pound (£F 111 = £100 sterling). Budget (est. 1950): revenue £F 3,754,132; expenditure £F 3,655,485. Foreign Trade (1949): imports £F 6,990,977; exports, incl. re-exports, £F 6,843,866. Principal exports: sugar (1949-50 crop 140,035 tons), gold, copra.

See C. K. Roth, "Fiji: Seventy-five Years of Native Administration," *Corona* (London, Sept., 1950). (K. G. B.)

FINLAND. A republic of northeastern Europe. Area: 130,165 sq.mi., including Ahvenanmaa or Åland Islands (581 sq.mi.) and inland waters (12,190 sq.mi.) but excluding territory ceded or leased to the U.S.S.R. in 1944. Pop.: (1940 census) 3,710,800; (mid-1949 est.) 4,015,000. Language (1940 census): Finnish 3,327,534 (87·5%), Swedish 353,985 (9·3%), Russian 7,210, Lappish 2,345. Religion: Lutheran 96%, Greek Orthodox 1·8%, other 2·2%. Chief towns (1946 est.): Helsinki or Helsingfors, (cap., 371,662); Turku or Åbo (96,470); Tampere or Tammerfors (89,071). President, Juho Kusti Paasikivi (elected March 9, 1946; re-elected Jan. 17, 1950); prime ministers in 1950, Karl August Fagerholm and, from March 14, Urho Kekkonen (*q.v.*).

History. The year 1950 began with a presidential election, an event of great importance because the president's powers are greater than in any other democratic republic except the U.S. There were three candidates: Dr. Juho Paasikivi, who was standing for re-election with the support of the Social Democratic party; Dr. Urho Kekkonen, leader of the Agrarian party; and Mauno Pekkala who had the support of the Communists and their associates. The Soviet government chose the election period as a time to give Finland a sight of the whip: it demanded the extradition of a number of alleged "war criminals" who had found refuge in Finland and accused the Finnish government of having violated the peace treaty by harbouring them; but it could hardly have imagined that this could have been enough to secure many voters for Pekkala.

Dr. Paasikivi was re-elected: the government resigns on the election of a president, and he found himself faced with a difficult problem in cabinet-making. The Social Democrats could hardly continue in office because they had only a minority in the House of Representatives and could not hope to survive opposition to them, which voting in the presidential election had shown to be growing. Dr. Paasikivi could not persuade the parties to come together in a general coalition and in the end he accepted Dr. Kekkonen as prime minister and minister of the interior, leading a government of Agrarians, with some members of the small Swedish People's and Finnish Progressive (Liberal) parties. It was the first Finnish government since 1937 which included no representation of the parties of the Left. It was also a minority government, for it could count on only 75 of the 200 votes in the House. Its continued existence depended, therefore, on the support of the National Union (Conservative) party, if not on that of the Social Democrats.



Juho Kusti Paasikivi (right) acknowledging the congratulations of parliament after his re-election as president. With him is the prime minister, Karl August Fagerholm.

Dr. Kekkonen's first success was the Russo-Finnish trade agreement which was concluded in June after seven months of negotiation. The Russians had seemed unwilling to conclude the agreement while negotiating with the Social Democrats whom they had cast in the role of their greatest enemies in Finland. They had interrupted negotiations during the presidential election and the period of cabinet-forming so as to apply pressure to bring Communists into the new government, but when Dr. Kekkonen formed his cabinet without Communists they seemed happy enough to negotiate with him. The agreement, which was for the first time on a rouble basis, provided for a great increase in Russo-Finnish trade for the period to Dec. 31, 1955. The U.S.S.R. would send to Finland during the 5-year period foodstuffs and raw materials including 455,000 tons of wheat, 320,000 tons of sugar and large quantities of cattle-cake, industrial chemicals, ferro-manganese and oil and petrol. Finland would send to the U.S.S.R. industrial products including 57 ships, 200 barges, 60 schooners, large quantities of machinery, timber-making equipment, cables and pumps (one item specified was the building of an entire new power station in Karelia). These guaranteed exports would go a long way towards solving the problem of the new Finnish light industries which had been set up to make the reparation goods demanded by the U.S.S.R. after World War II. Industrial workers in Finland numbered only 40,000 in 1937 while in 1949 they numbered 86,000, and there could have been little hope of employing them after reparation deliveries ceased in 1952 without the assurance of a continued industrial export market. The Finns were pleased with the terms of the agreement. The total value of Russo-Finnish trade in the period would be 1,410 million roubles ($352·2 million) each way, and the prices paid for each commodity would be those of the world market converted, of course, to roubles at the official rates.

Thanks partly to this agreement, the fears of a general war which became apparent in some other democratic countries in Europe after war had begun in Korea did not touch the Finns. If they had reason to be scared of anything in the summer and autumn, it was of inflation. The cost of living had been rising, and according to an understanding between the government

and the trade unions any substantial rise in the cost-of-living index was to be followed by a rise in wages. The government kept the index from mounting to a point which would necessitate a wage increase by granting subsidies and increasing family allowances, but many of the workers felt cheated and, encouraged by the Social Democrat leaders who were impatient to return to office, they threatened strikes unless wages were immediately and very considerably raised.

On Aug. 28 60,000 metal workers went on strike. The strike quickly spread to machine workers and workers in the mechanical wood-working industries: more than 120,000 men laid down their tools knowing that this would mean delay in the delivery of reparations to the U.S.S.R. and that delay, besides possibly vitiating relations between Finland and the Soviet Union, would incur a fine of 5% a month. In October the situation worsened. The federation of trade unions proclaimed a general strike for Oct. 22. This crisis was avoided at the last minute by the federation's accepting, by 65 votes to 35, a government conciliation committee's compromise. The general strike was called off and in November the unions one by one reached agreement with the employers on wage-increases and returned to work.

The Social Democrats were not dissatisfied with this result, but the Communists were bitter: they had not instigated the strikes but they had encouraged them and had hoped that continued deadlock would lead to a situation which would make Communist control possible. In the meantime the danger of inflation continued and Finns ended the year in a state of some apprehension on this score. (J. H. JN.)

Education. Schools (1948): elementary 6,050, pupils 481,392; secondary 318, pupils 87,740, teachers 5,147; teachers' training 9, students 1,536, teachers 116; for adults 75, students 4,245, teachers 634; technical 459, pupils 26,121. Universities (1949) 3, students 10,400, professors and lecturers 601; institutions of higher education 5, students 3,379, professors and lecturers 367.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): wheat 265 (324); barley 214 (181); oats 640 (725); rye 199 (219); potatoes 1,950 (1,047); sugar, raw value 21 (23); hemp and flax fibre 3·6 (4·0). Livestock ('000 head, March 1949): cattle 1,538; sheep 1,067; pigs 409; horses 402. Fisheries: total catch (metric tons, 1948; 1949 in brackets) 46,100 (65,700).

Industry. Industrial establishments (1947): 5,999; persons employed 249,936. Electricity production (million kwh., 1949; 1950, six months, in brackets): 3,480 (2,008). Raw materials: steel, rolled (metric tons, 1949) 90,000; steel castings (metric tons, nine months, 1949) 7,500; copper (metric tons, 1949; 1950, six months, in brackets) 20,640 (12,020). Forest products (1949; 1950, six months, in brackets): sawn goods ('000 standards) 850 (503); cellulose ('000 metric tons) 1,015 (604); mechanical pulp ('000 metric tons) 146 (94); newsprint ('000 metric tons) 382 (208); other paper ('000 metric tons) 183 (105); boards and cardboards 104 (66); plywood ('000 cu. metres) 231 (119).

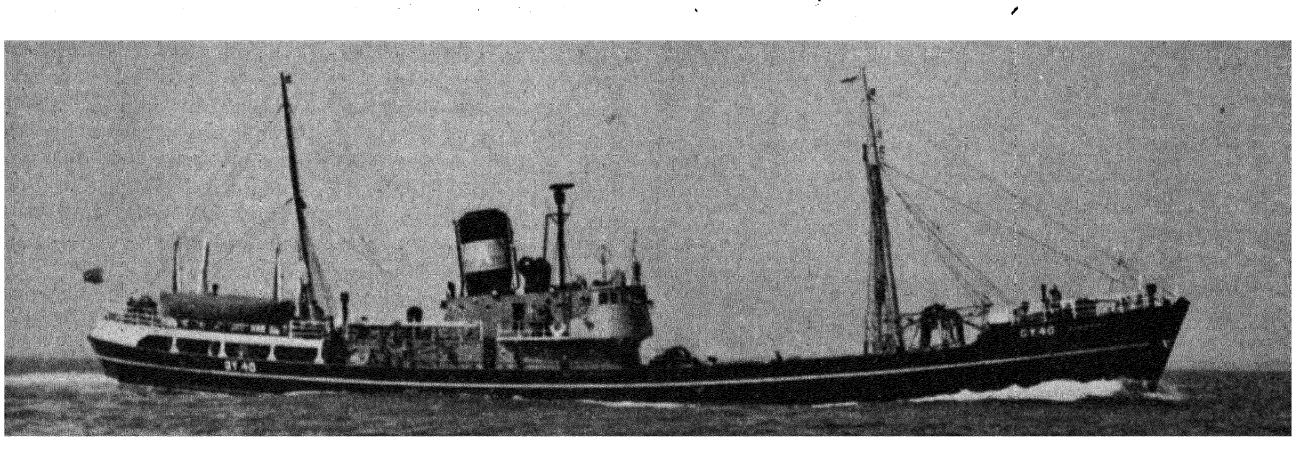
Foreign Trade. (Million markkaa, 1949; 1950, six months, in brackets): import 66,278 (40,365); export 65,606, excluding reparations of 12,226 (32,390, excluding reparations of 4,303). Main sources of imports (1949): U.K. 22·1%; U.S.S.R. 11·4%; France 9·6%. Main destinations of exports: U.K. 27·2%; U.S.S.R. 15·3%; U.S. 7·6%. Main imports: metals and manufactures 18%; textiles 18%; fuel and oils 9%; machinery and apparatus 8%. Main exports: wood and wooden goods 47%; woodpulp 22%; cardboard and paper 19%.

Transport and Communications. Roads (1947): 36,641 mi. Licensed motor vehicles (Dec. 1949): cars 13,570; commercial 32,261. Railways (1949): 3,533 mi.; passenger journeys 43 million; freight net ton-mi. 1,872 million. Shipping (July 1949): number of merchant vessels of 100 gross tons and over 319; total tonnage 493,970. Air transport (1949): passenger-mi. 13·9 million; cargo net ton-mi. 280,000. Telephones (1949): 302,104. Wireless licences (1949): 662,000.

Finance and Banking. (Million markkaa) budget: (1949) revenue 125,981, expenditure 132,827; (1950 est.) revenue 104,463, expenditure 104,379. National debt (July 1949; July 1950 in brackets) 123,396 (137,369). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 28,800 (34,500). Gold and foreign exchange (million U.S. dollars, Aug. 1949; Aug. 1950 in brackets): 82·7 (66·0). Bank deposits (Sept. 1949; Sept. 1950 in brackets): 23,000 (30,000). Monetary unit: *markka* with an exchange rate Fmk. 645 to the pound and Fmk. 231 to the U.S. dollar.

FISHERIES. World Production. Progress in the development of greater efficiency and greater production in fisheries throughout the world was generally rather slow during 1950 with increased production in some local fisheries being offset by decreased production due to natural causes or too much fishing in other fisheries. World War II, causing widespread reduction of fishing, seriously affected world fisheries production for nearly ten years; in 1950, for the first year since the ending of the war, its effect on conditions in most fisheries and on total world production was not very marked. The collection of fisheries statistics was not organized in all the fishing countries of the world and publication of records of catches usually occurred some considerable time after the ending of the year to which they referred; consequently the exact total of world fisheries production in 1950 was not yet available. However, it was not very different from the estimated 17 million tons in prewar years.

In most of the principal countries whose fisheries were restricted by the war, annual production had by 1950 so increased, and in some waters stocks of fish had been so reduced by intensive fishing, that the fishing industries generally were concerned more with their own economic operations than with further increases of total production. Costs of fishing gear and of operating ships were high and increasing, while the demand for fish in countries such as the U.S. and those of western Europe where other foods had become more easily available than in previous years was not such as to support high prices for catches. At the United Nations scientific conference on the conservation and utilization of resources in 1949 it was estimated that world



A modern long-range steam trawler of the type that in 1950 was being used in increasing numbers in the north Atlantic, Arctic and south Pacific oceans.

fisheries production could be increased to about 22% above its 1938 level mainly by exploiting latent resources of fish while maintaining production on the already well-established fisheries. During 1950 the established fisheries produced almost their estimated maxima while only a small beginning was made in exploiting new fisheries. Within some of the established fisheries, notably those in northwest Europe, the fisheries showed definite signs of being overfished. The waters further from the main fishing ports supported greater stocks of fish so that throughout the world the trend towards building larger fishing vessels, especially long-range trawlers capable of carrying some 250 tons of fish or more, continued.

Great Britain. The year 1950 was one of economic difficulties for the British fishing industry. In the trawling industry the high cost of running ships was scarcely balanced by the price realized by catches. The situation was aggravated by the increased availability of other foods and by the depletion of fish stocks in the North sea and the western approaches caused by overfishing. Regulations controlling the price of fish were lifted in April and prices for a short while afterwards fluctuated considerably. For many months a large number of trawlers lay idle. The government set up a white fish authority with powers to regulate, reorganize and develop the white fish industry. Before the authority became operative, trawlers up to 140 ft. in length were subsidized for six months. Because of the poor hake fishing off Ireland some trawlers ventured as far as latitude 18°N. off west Africa where they succeeded in finding larger quantities of hake. The total quantity of wet fish landed in Great Britain in 1950 was 17,654,000 cwt. worth £35,702,000 as compared with 20,034,000 cwt. worth £39,790,000 in 1949. The herring fisheries in Scotland were not very successful, many drifters not paying their way, but the East Anglian season brought big catches and started early. The total landings of herring in Yarmouth and Lowestoft in October and November were 332,000 crans, as against 290,000 crans in 1949 when more drifters took part. Thirty-nine new trawlers were built in British shipyards for British owners during 1950, 12 of them near-water diesel-engined vessels of length less than 130 ft., 1 mid-water and 26 distant water vessels of lengths of over 140 ft. The total was similar to that for 1949 but included 5 fewer distant-water and 9 more near-water trawlers.

United States. The total production of the fisheries in the United States was not much different from the 2,182,000 metric tons of 1949. The Atlantic trawl fishery employed more of the larger trawlers going rather further afield. The Pacific tuna fishery continued to expand and its products were in demand; in the first six months of the year 160 million lb. were taken as compared with 134 million lb. in the same period of 1949. A new fishery for shrimps in the Gulf of Mexico was started and rapidly developed in 1950. The valuable and important Pacific pilchard fishery, which failed so badly in the 1947-48 season when only 130,000 short tons were landed as compared with 614,000 tons in 1944-45, had partially recovered, yielding 334,000 tons in 1949-50, but returns for more than half of the 1950-51 season indicated that the recovery was not continuing. It would seem that some natural catastrophe had befallen the stock of pilchards. The Pacific halibut fishery continued to thrive under control and the international quota for 1950 was set at 54 million lb.

Norway. After several poor years the Norwegian cod fishery improved in 1950 and the herring fishery was very successful. In the 1950 season 758,322 metric tons of herring were landed in Norway, as compared with 820,260 metric tons in the record year of 1948. Of the year's total catch of herrings 90% was used for reduction to meal and oil.

Iceland. Several large deep-sea trawlers were delivered from British shipyards and by the end of 1950 Iceland had become one of the more important trawling countries in Europe, supplying the markets of Germany and Great Britain with fresh fish and her own export trade with salted and dried cod. Germany, with a fleet of some old and some new vessels, was able to supply most of the white fish and an increased proportion of the herrings required by the western zones. Partly as a consequence of the overfishing of the stocks of demersal fish in western European waters, several European nations took an active interest in western Atlantic fisheries; pareja trawlers from Spain and large, specially constructed French trawlers 223 ft. in length operated on the Newfoundland banks. The long established Portuguese sardine fishery was less productive in 1950 than in previous years while the French North African sardine fishery expanded.

Japan. Despite the loss of her colonies and the limitations imposed upon her fisheries after the war by the supreme commander for the Allied Powers, Japan retained her position as the greatest fish producing nation of the world. In 1945 the total Japanese production of fish was 1,810,000 metric tons or about one third of the prewar quantity; in 1949 it had been increased to 3,113,000 metric tons which was approaching a maximum within the limits of the area in which Japanese fishermen were then allowed to operate. During 1950 the fishing area was extended by allowing tuna-catching expeditions working with motherships to operate as far south as the equator. The new area included the waters around the Caroline, Mariana and Marshall islands. It was estimated that total fish production by Japan in 1950 would be 3,180,000 tons, about 18% of the world total.

U.S.S.R. Little was known about the fisheries of the U.S.S.R., but the five-year plan had aimed at a total annual production of 2 million tons by the end of 1950. That total was probably achieved or closely approached. Russian fishing vessels extended their operations during the year to some of the herring fishing grounds of the North sea.

International Administration. The 38th meeting of the International Council for the Exploration of the Sea was held in Copenhagen. The overfishing problem was, as previously, well to the fore, but the overfishing convention which the council had drawn up in 1946 had still not been put into operation because Belgium had not ratified it. It was clear at the meeting that most of the ratifying countries were willing to bring the convention into force immediately if all other ratifying countries were agreed, but the Netherlands foresaw great difficulties so long as Belgium did not comply and the fishermen of the two neighbouring countries fished the same grounds. At Gothenburg, a meeting of representatives of the fishing industries of several European countries also sought a means of restricting overfishing by getting the 1946 convention put into force by ratifying governments or by introducing to European sea fisheries some conservation method such as the restriction of catches by quotas.

In the Convention for the Conservation of the Northwest Atlantic Ocean, drawn up in 1949, provision was made that at least four of the signatory governments must ratify it before it could be brought into force. By June 1950 the governments of the U.S., Great Britain, Iceland and Canada had ratified the convention so that a start could be made on the programme of investigation that it suggested. The dispute between Great Britain and Norway about the limits of territorial waters, taken to the International Court of Justice at the Hague in 1949, remained with the court throughout 1950.

Development and Research. Throughout the world, and especially in countries with small and not highly organized fisheries, considerable attention was paid in 1950 to the formulation and pioneer operation of plans to increase and improve the utilization of local fishery resources. The United

Nations Food and Agriculture organization was of great value in providing assistance and advice for such schemes. In tropical countries attention had to be paid not only to catching fish but also to its preservation. In India where about 520,000 tons of fish, some two-thirds of it marine, were landed in 1947-48, schemes were started whereby inland waters were restocked with fry of fast-growing species of fish while the prospects of increasing deep-sea trawling were investigated. The F.A.O. assisted Ceylon with a project to achieve " better and greater utilization of fish resources." Ceylon's average annual production of about 38,000 tons of fish was caught mainly off the open beaches and in coastal waters by small canoes; one plan adopted was to take the canoes further out to sea, operating in groups with a mother-ship. A large modern deep-sea trawler was fitted out in Great Britain for operation in the waters around Ceylon. In Malaya, where annual production was low at about 140 million lb., a scheme was started in Penang for training and research in pond culture methods. Also in the Indian ocean, from Mauritius, a new deep-sea fishery was started; a wartime corvette was fitted out in Great Britain for line fishing and with complete apparatus for freezing catches and storing frozen fish on board.

In prewar years the population of the Philippine Islands consumed about 100 lb. of fish per head per annum and this was all supplied by local fisheries. After the war the local fisheries could supply only 60% of the island's requirements. During 1950 Filipinos were advised by and trained in the U.S. to start research to find a way to make the islands self-supporting in fish.

Pond culture experiments were started in the marsh districts of Jamaica and by the British Colonial Development corporation in parts of Africa. Other activities of the Colonial Development corporation included the launching of a scheme for the Seychelles to supply dried fish to East Africa, the promotion of trawling off West Africa by powered ships operating from Lagos (with the distribution of their catches ashore in insulated motor vans) and the development of a fishery for sharks and tuna off West Africa by expeditions from Gibraltar. For French West Africa plans were formulated to form co-operatives of existing coastal fishermen, to increase the number of fishermen and extent of the fisheries, and to modernize and increase the amount of fishing equipment. The fisheries of the Union of South Africa continued to expand throughout 1950; especially important was the pilchard fishery.

In Italy a programme was put forward to increase fish production by developing new trawling grounds in the Mediterranean and to augment by cultural methods the production of the inland lakes. Israel aimed at supplying herself with 15,000 metric tons of fish each year (about three-quarters of the total requirement of the country) by the end of 1952. Fish ponds were the most productive fisheries in Israel and the programme included development of culture as well as expanded marine and lake fisheries. In Chile, a country which owned no fishing ships, a private company started fishing in 1950 with a trawler and two cutters from Germany, while in Panama a corporation was set up to develop fishing.

Technical developments in fisheries during 1950 were chiefly towards improving the quality of fish preservation. A refrigerator ship was working from Mauritius; and the pioneer ship " Fairfree " continued to operate from Scotland landing quick-frozen packages of fish, and similar ships were fitted out in the U.S. and Spain to freeze their own catches. A modern English deep-sea trawler was also fitted with experimental freezing apparatus. A Norwegian herring-reduction factory-ship began operations during the year; this proved very successful, being able to process into meal and oil 370 metric tons of fish every 24 hr. Aircraft were used to aid fishermen in the U.S. where a helicopter located shoals for the Pacific tuna fleet and in Australia where scout planes searched for pilchard shoals. The increase in trawling for herring in the North sea and Scandinavian waters continued in 1950 and the method of mid-water trawling with light floating trawls by Swedish and Danish vessels was established.

Scientific investigations, especially into developing fisheries and conserving fish stocks, were maintained as an essential aid to fishing industries by almost all countries of the world and research ships operated in many waters. The new ships " G.O. Sars " of Norway and " John N. Cobb " of the U.S. began service in 1950, the latter to search for untapped resources of fish, especially tuna, in the Pacific. In the Great Lakes of North America, where the sea lamprey had caused marked reductions of the stocks of lake trout, research was started to find suitable methods of controlling the pest.

Perhaps one of the more outstanding fishing novelties still in its early stages of development was the use of electricity for catching fish. The discovery of the behaviour of fish in an electric field and the stunning of salmon by electrocution at weirs in Sweden was recent. Research during 1950 indicated how fish could be guided in the water by the use of suitably placed electrodes. A Russian scientist, M. F. Chernighin, claimed to have caught fish in open waters by guiding shoals of pelagic fish by an electric current to the entrance of a powerful apparatus that sucked them into the ship. It appeared that the implications of these findings might well be far-reaching in the fishing industry. In Great Britain advances were made in the use of supersonic echo-sounders for locating and identifying shoals of fish, and underwater photography by frogmen (whose method of diving was developed during World War II) was successfully used to make the first film of a trawl in action. (*See* also MARINE BIOLOGY; ZOOLOGY.) (A. R. M.)

FIVES. *Rugby Fives.* A. D. R. Dawes, school champion of 1949, created a record in 1950 by winning the open singles competition at his first attempt, beating C. T. Reichwald in the final. The entry for this event was the biggest on record; unfortunately B. M. W. Trapnell, the holder, had to withdraw during the competition through illness. A. D. R. Dawes partnering J. R. Nichol, one of the Oundle pair who won the schools doubles last season, won the open doubles (Cyriax cup), defeating R. B. A. Smith and E. T. Fletcher in the final. The previous holders B. M. W. Trapnell and E. S. Isaacs did not compete. J. F. Pretlove (Alleyn's) won the schools singles, beating J. L. Pritchard (Oundle) in the final. For the first time for 15 years Oundle did not retain the doubles cup, which was won by the Denstone pair, S. D. Hignell and W. G. Tobias, who beat J. J. Orchard and J. F. Pretlove in the final. In the university match Cambridge beat Oxford by 232 points to 226. A new constitution of the Rugby Fives association was adopted and rules for match play were added to the existing rules. (G. R. RR.)

Eton Fives. J. M. Peterson and C. E. W. Sheepshanks defeated A. R. Kittermaster and A. R. B. Moulsdale by three games to none in the final of the amateur championship (Kinnaird cup), for which 30 pairs entered. The public school's handicap competition was won by Charterhouse (J. W. H. May and M. Burton-Brown), who defeated Harrow (D. J. S. Guilford and R. W. Smart). In the university match Cambridge defeated Oxford by two matches to one.

The laws of the game were considerably revised in Oct. 1950. The Old Harrovians, Old Citizens and Old Olavians and Mill Hill school rejoined the Eton Fives association. The Old Cranleighans and Cranleigh school were elected members. (H. L. B.)

FLAX: *see* LINEN AND FLAX.

FLOODS AND FLOOD CONTROL. There were no serious or prolonged floods in Great Britain during 1950, although may parts suffered as a result of heavy rains in November. Further progress was made in the execution of control work previously planned: in particular, the River Great Ouse Catchment board installed an additional pump unit at the St. Germans pumping station which would make this station's output larger than any other's in the country, by draining an area of 178,000 ac.; the capacity was nearly 4,000 cu.ft. per second and the total power installed was 7,500 b.h.p. The River Eden Catchment board's scheme to improve the flow of the river between the North British bridge and the Eden bridge at Carlisle, so as to prevent flooding of the adjacent agricultural land, at an estimated cost of £140,000, was approved by the Ministry of Agriculture. At Nottingham more than one-fifth of the protection scheme on either side of Trent Lane was realized during the year; the cost, part of the River Trent Catchment board's five-year programme amounting to £1,832,000, was estimated at £520,000.

Coast Erosion and Protection. Considerable progress was made on sea defence works, largely as a consequence of the Coast Protection act, 1949. A scheme for a sea wall and groynes to protect the 70-ft. limestone cliffs near Seaham, County Durham, estimated to cost £140,000, was submitted for the approval of the Ministry of Health. In Norfolk work was in progress at Sheringham, Cromer and Caister, comprising steel sheet piling and a concrete apron and toe to protect the existing sea walls. Somewhat similar works were undertaken at Southwold and Aldeburgh in Suffolk.

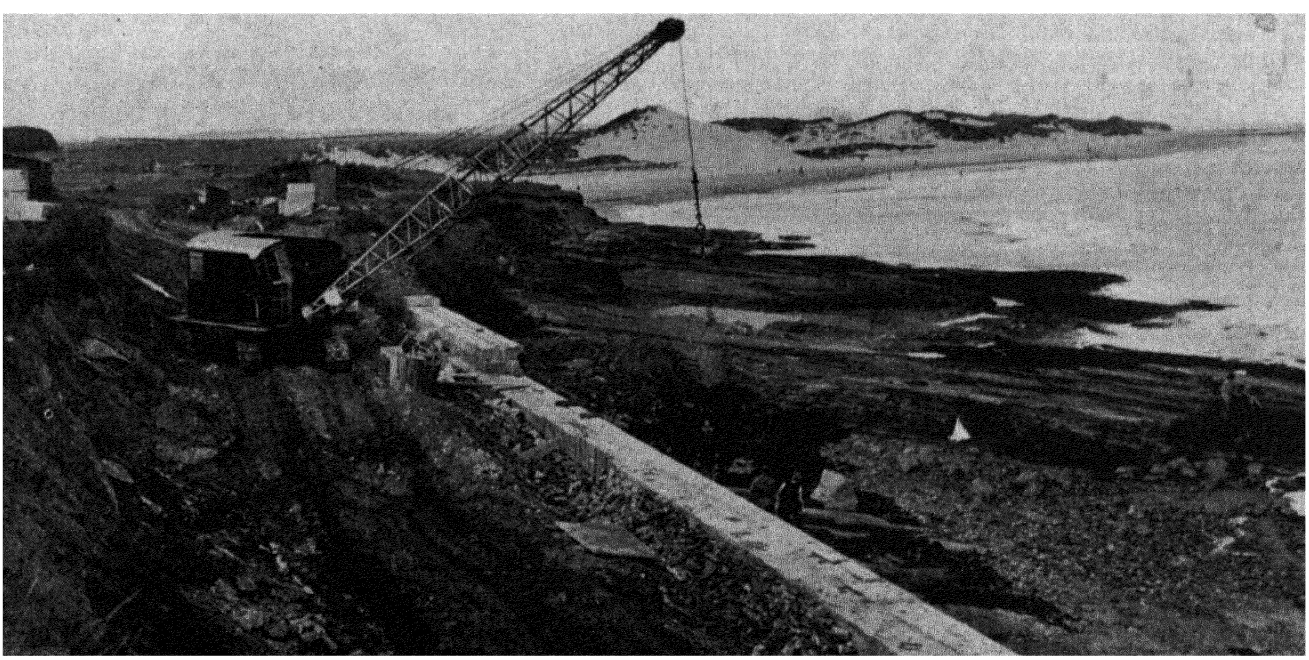
New works were carried out at Herne Bay and Whitstable in Kent, and a scheme was prepared for stabilizing a further length of cliff east of Herne Bay, at an estimated cost of more than £300,000 (a large sum in relation to the value of the few private properties which would be protected by the proposed works). Work was also in progress at St. Margaret's Bay and Folkestone.

The strengthening of the sea wall was continued at Seaford, Sussex; and a scheme was prepared, estimated to cost more than £1 million, for the protection of Selsey, where the coastline had been eroded in places at the rate of 20 ft. a year. Further progress was made on sea walls, breastworks and groynes to protect a small bungalow town at Hayling Island, Hampshire. At Southbourne, near Bournemouth, it was proposed to protect a number of houses at the top of the cliffs. At Llandudno sea defence works (estimated cost £123,000) were begun on the west shore, to repair 3,000 ft. of defences that had been seriously damaged in severe storms during the preceding two years. The operations to protect the central part of the town and to rehabilitate the harbour works at Aberystwyth were completed at a cost of £80,000.

Australia. For the second year in succession Central Australia suffered severe floods. The main rivers, normally dry, which wind their way hundreds of miles across desert, plain and sand hill, became rushing streams. The Cooper creek near Lake Eyre was extended to a width of 2-3 mi., reached the depth of 25-30 ft. and flowed at the rate of 8-10 m.p.h. In Queensland many sheep were lost, and food had to be dropped from aircraft to the graziers and flood-bound townspeople. Millions of pounds' worth of damage was done in many parts of New South Wales after torrential rains accompanied by a 90-m.p.h. cyclone, which caused the worst floods experienced in 50 years: a coastal strip 200 mi. long and 60 mi. wide, comprising the richest dairy, banana and tomato country, became a series of lakes. The rainfall in Sydney in June reached 26 in., exceeding the previous record of 24½ in. (April 1861). Several road bridges and some railway lines were washed away.

New Zealand. In May the west coast of South Island, New Zealand, suffered widespread damage through floods. At Reefton ten inches of rain fell in four days, and in the mountains rainfall was much heavier. Four big bridges were swept away and power and telegraph lines were brought down. Railway traffic was suspended for nearly a fortnight.

India and Pakistan. Flooding of the Kosi river and its tributaries was caused by heavy rain in August and resulted in a major catastrophe in northeastern Bihar, India. Devastation affected more than 400 villages and involved 70% of the maize crop. The Bhagalpur division, embracing the flat country north of the Ganges, also suffered heavily. About 4,000 sq.mi. in the West Punjab, including several thousand villages, were flooded; road and rail links between



A new concrete sea wall under construction in 1950 on the Northumberland coast of England.

Karachi and northern Pakistan were cut; Lahore and many other towns were isolated; and damage was estimated at approximately £35 million.

It was planned to bring under cultivation 4·5 million ac. in the Krishna-Pennar area within 15 years at an estimated cost of Rs. 1,200 million, each stage of the project being partly self-paying: a million acres were to be brought under cultivation on completion of the first stage. In the Patna, Monghyr and Gaya districts about 50,000 ac. were to be irrigated by means of the Sakri canal, completed in 1950; another dam was planned for the upper reaches of the Sakri river, to irrigate nearly 75,000 additional ac.

Progress was made on the barrage at Tilpara across the river Mayurakshi and in the excavation of some 440 mi. of canals in West Bengal to conserve the rains for irrigating 100,000 ac.

China. It was announced in Peking that the Hwai river, whose floods had claimed millions of victims in the past, was to be harnessed: large reservoirs were to be built in the upper reaches in Honan province to store flood water; in the middle reaches existing lakes were to be deepened and new ones provided; and a completely new outlet to the Yellow sea was to be constructed in Kiangsu province north of Shanghai.

Japan. Serious floods occurred in Japan as a result of breaks in the embankment of the Kokai river on the border of the Chiba and Ibaragi prefectures: 6,500 houses were damaged and 40,000 people rendered homeless; the flood waters extended over a width of nearly 2½ mi.

Canada. After serious flooding in North Dakota, U.S., the Red river began on April 19 to rise to a dangerous level north of the U.S.-Canadian border and within six days reached a height of over 44 ft. at Ernerson on the frontier, 60 mi. S. of Winnipeg. By May 7 there were expanses of water 14 mi. wide in some places; and on May 19, when the flood was at its height, it was estimated that 600 sq.mi. were under water. All towns and villages in the river valley south of Winnipeg were evacuated, and many inhabitants of isolated farms were rescued by the Royal Canadian Mounted Police. An appeal was made on May 10 that as many women and children as possible should leave Winnipeg, whose population had been greatly increased by the influx of 40,000 refugees from the flooded rural areas; and about 100,000 people out of a normal population of 350,000 left during the succeeding week. The evacuation of the remaining inhabitants was planned, and all R.C.A.F. transport planes were ordered to stand by for an emergency. The maximum depth reached at Winnipeg was 30·3 ft., but after a spell of dry weather the floods gradually subsided. The damage was estimated at about $26 million, and nearly 10,000 houses in Winnipeg were affected. (J. Kd.)

United States. The U.S. Flood Control act approved on Sept. 6, 1950, provided $321,627,150 for flood control work during the fiscal year ending June 30, 1951. Apart from the lower Mississippi river and the Sacramento river, flood control construction was continued or begun on 101 projects in 33 states. The $61,400,400 funds allotted to the lower Mississippi river project were designated for work in seven states: Kentucky, Illinois, Tennessee, Louisiana, Missouri, Arkansas and Mississippi. Congress also passed a supplemental appropriation act, providing $2,900,000 for the flood control project at Albeni Falls, Idaho, and a $6 million emergency fund.

At the end of June 1950 approximately 290 flood control projects were in operation, 34 of them new projects. Reservoirs placed in operation during the fiscal year included: Cherry Creek, Colorado; Allatoona, Georgia; Lac Qui Parle, Minnesota; Edward MacDowell, New Hampshire; East Sidney, New York; and the Heyburn, Oklahoma. Major local protection projects put into operation during the fiscal year included the projects at: Riverdale, Massachusetts; Harrisonville and Ivy Landing, Drainage and Levee District No. 2, Illinois; Elkport, Iowa; Lacey Langellier, West Matanzos and Kerton Valley Drainage and Levee district, Illinois; Coal Creek Drainage and Levee district, Illinois; and Syracuse, New York.

Channel improvement of the Mississippi river proper was continued during 1950 at a number of places below Cairo, Illinois. Additional levee construction authorized by congress brought the total system to about 3,000 mi. of levees. Completed levee construction totalled approximately 1,600 mi, of main-stem levees, extending from near Head of Passes, Louisiana, to Rock Island, Illinois. Co-ordinated with the main-stem levees were 1,400 mi. of tributary levees, about half complete in 1950. Below Cairo work continued on river bank protection. Revetment in place totalled approximately 200 mi. of river bank.

Damaging floods occurred on the Wabash river and lower Ohio river basin in Jan. and Feb. 1950, flooding approximately 3 million ac. of agricultural land and causing a total damage of approximately $19 million. A series of storms beginning in the lower Mississippi river basin in early January and continuing at intervals of from one to three days in various sections until the middle of Feb. 1950 caused flooding on the lower Mississippi river and its tributaries, the Red, Ouachita, Atchafalaya basins in Louisiana and the Yazoo river in Mississippi. The flood was one of the greatest on record, with water at Cairo reaching the third highest stage on record and at New Orleans the highest level since 1927. The evacuation of 16,500 people from the affected areas was necessary. An estimated 1,470,000 ac. were flooded, with a total damage of $17,159,000. Flood control works prevented approximately $700,000,000 damage.

In April and May 1950, the Red river of the north, in Minnesota and North Dakota, exceeded all previous flood records for this basin. Five lives were lost, 1,127,000 ac. were flooded, and total damage was $32,670,000. On May 9, 1950, a flash flood caused by 12 in. of rain in less than 4 hr. in the Salt creek basin in Nebraska took a total of 22 lives and did $9 million damage to property. Flash floods caused by intense rain occurred in West Virginia on June 25-26, 1950; 33 lives were lost and property damage totalled approximately $5 million. (*See* also Meteorology; Soil Conservation.) (G. Hb.)

FLOUR: *see* Bread and Bakery Products.

FLOWER AND FLOWER FARMING: *see* Horticulture.

FOOD RESEARCH. A new concept relating nutrition to disease, evolved on the basis of experimental nutrition, was called genetotrophism. A genetotrophic disease was defined in 1950 by Roger J. Williams, Ernest Beerstecher, Jr., and L. Joe Berry as one which occurred if a diet failed to provide a sufficient supply of one or more nutrients required at high levels because of the characteristic genetic pattern of the person concerned. This concept was believed to be the basis for many diseases, including alcoholism.

Alcoholism was studied in its relation to individuality in metabolism. The craving for alcohol was assumed to have a physical and genetic basis similar to that of other special appetites that are under physiological control. Experiments with rats and mice demonstrated that consumption of alcohol by laboratory animals is a genetotrophic phenomenon. Ordinary laboratory animals subsisting on stock diets, given a choice between 10% alcohol and water, reacted variously as teetotallers, as moderate steady drinkers, as spasmodic

drinkers or as drinkers with mounting appetites. The drinking patterns appeared on a constant diet to be wholly under genetic control but experiment demonstrated that they could be shifted by nutritional means from one extreme to the other.

The relationship of serum cholesterol and arteriosclerosis in man had been poorly understood. Attempts to increase the cholesterol in blood serum had failed in nearly all cases or been difficult to interpret. William J. Messinger, Yetta Porosowska and J. Murray Steele reported an increase in the serum cholesterol of human subjects after feeding large amounts of egg-yolk powder, amounts far in excess of those eaten by the normal man, whereas feeding of cholesterol did not produce a change in serum levels. Fifteen men and four women from 46 to 69 years of age, known to have arteriosclerosis of considerable degree, consumed a hospital diet providing, on an average, 70 grams of fat daily. The concentration of cholesterol in blood serum was determined at weekly intervals during feeding experiments and control periods. In two experiments, a total of 18 subjects were given powdered egg yolk, 10 received 150 grams daily and 8 had 100 grams daily for 42 days. In each case the serum cholesterol was observed to increase with the ingestion of egg yolk powder.

An entirely new vista in experimental nutrition was opened by the discovery of rates in growth of animals far in excess of rates achieved on what had been considered as optimum natural rations, by the use of rations containing inexpensive plant proteins supplemented with vitamin B_{12} and one or another antibiotic. E. L. R. Stokstad and T. H. Jukes observed growth-promoting effects for chicks by fermentation residues from *Streptomyces aureofaciens* (the organism used for the production of aureomycin). Supplements of dried whey or fish meal produced no such effects. The magnitude of the growth effect was shown by the following average weights of individual chicks after 25 days on the experimental ration (soya bean meal base): basal ration plus vitamin B_{12}, 281 grams; basal ration plus vitamin B_{12} plus aureomycin residue, 360 grams. Chemical fractionation of the "growth factor" in the aureomycin residue revealed it to have properties similar to those of aureomycin itself. Consequently, pure crystalline aureomycin was tested and found to produce growth responses of the same type and of nearly the same magnitude as those produced by the crude aureomycin residues. That the observations, made with chicks, might have general validity in animal nutrition was indicated by the result of collaborative work between T. H. Jukes, E. L. R. Stokstad and R. R. Taylor at Lederle laboratories, Pearl River, New York, and T. J. Cunha, H. M. Edward and G. B. Meadows at the University of Florida. These workers showed that additions of crystalline aureomycin (100 milligrams per kg. of ration) to a vitamin B_{12} ration produced the same type of extra weight gains in pigs that had been observed in chicks. Mixtures of crystalline vitamin B_{12} and crystalline aureomycin duplicated the growth-promoting effect of the crude aureomycin residues in this animal. Again, the effect of aureomycin was not specific, for R. W. Luecke, W. N. McMillen, and F. Thorp, Jr., reported that with mixtures of pure vitamin B_{12} and streptomycin the growth-promoting effect for pigs of the supplement derived from *Streptomyces aureofaciens* fermentation could be duplicated.

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FOOD SUPPLY OF THE WORLD. The world in 1950 faced a new period of uncertainties and hostilities with its food situation in better order than at any time since the end of World War II. In a few sectors what had been regarded as burdensome surpluses hardly a year before were now regarded as essential margins of safety and there was a general wish for maximum food production, particularly of storable food. In great contrast with the uneasy, if not actually dangerous, food situation of the world in the early part of 1948, the widespread favourable harvests of 1948 and 1949 were followed by still further expanded food supplies in 1950 in most of the principal regions except the U.S. Prospects for meeting the effective demand for food in the 1950-51 consumption year, short of all-out war, were brighter than in any of the preceding postwar years, although a large proportion of the world's population nevertheless would not be and had not been adequately nourished. Food rationing and other restrictions were widely relaxed or abandoned, though the meat ration was further restricted in Great Britain; and there was much concern about possible price ceilings on foods in the U.S. early in 1951, though rationing was not expected in the near future. The improved situation was not so much the result of extremely large crops in one or two areas nor of an enormous yield of one major crop, but rather of a general improvement in many categories, particularly bread grains, rice, sugar, livestock products and vegetables. Carryover grain stocks in the four principal exporting countries on July 1, 1950, were 74,100,000 tons, only slightly larger than the 73,700,000 tons of 1949, but about 70% larger than the small stocks of 1948. A very large part, 78% of the total, was in the U.S.

Though crops were not very poor in any large area, famine, or near famine, returned to smaller parts of the world. A very bad drought in north China early in the year (deaths were estimated at as many as 10 million) was followed by floods in some sectors, but the situation appeared to be relieved by the summer and autumn harvests. The Danube basin, especially Yugoslavia, was hard-hit by drought and the resulting near-failure of the maize crop.

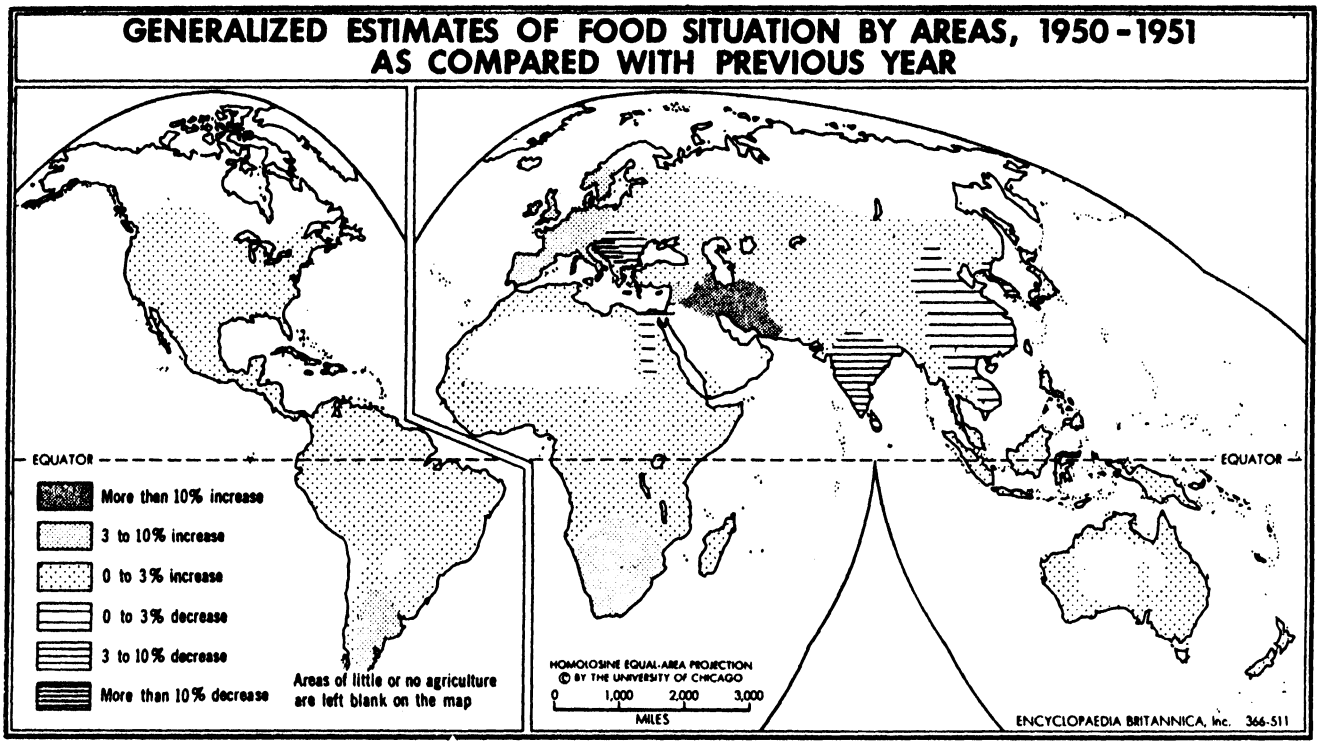
TABLE I. WORLD FOOD PRODUCTION BY COMMODITIES AND BY AREAS COMPARED WITH PREWAR
(% of prewar)

Food commodity	1946-47	1947-48	1948-49	1949-50	1950-51*
Bread grains	94	96	102	101	104
Rice	92	93	97	98	101
Coarse grains	104	97	110	104	102
Fats and oils	85	88	94	100	101
Sugar	90	92	108	106	120
Meat	94	93	94	97	98
Dairy products	88	87	90	95	97
Potatoes	84	83	105	96	101
Area					
Far East	90	92	95	96	97
Europe†	76	79	89	93	97
U.S. and Canada	135	128	138	133	135
Latin America	114	114	118	118	121
Australia and New Zealand	96	109	106	107	108
Africa and Near East	—	101	116	117	119
World average†	95	97	104	105	109

* Preliminary estimate. † Excluding the U.S.S.R.

Food aid to Yugoslavia, totalling nearly $100 million from the U.S. and some from Great Britain, was being given late in the year. Some neighbouring areas restored rationing. Partial crop failure seriously affected parts of India, where hunger and malnutrition are endemic and late in the year 2 million tons of wheat were requested from the U.S. in addition to grain sorghums previously arranged for.

Bread Grains, Wheat and Rye. World bread grain production estimates for 1950 were set at 239 million short tons, larger than the 233 million tons of 1949 and above the average 229 million tons of 1935-39. The world wheat crop, the best since World War II, was finally placed at 6,405



million bu., a figure well above the 6,270 million bu. of 1949 and substantially in excess of the 6,010 million bu. average for 1935-39. The increase was widespread, many areas sharing the abundance. The Canadian crop was about 100 million bu. larger than the 1949 harvest but the quality was much damaged by early frost. The U.S. crop was the seventh consecutive crop of more than 1,000 million bu. The European crop was slightly larger than that of 1949 and that of Asia substantially improved. The wheat crop of the U.S.S.R. of 1,110 million bu. was near that of 1949, but below the 1,240 million bu. average for 1935-39.

The world rye crop of 1950 totalled 1,665 million bu., as against 1,715 million bu. in 1949 and the 1,730 million bu. prewar average (1935-39). The decrease was largely in Europe, that continent in 1950 producing 685 million bu., compared with 710 million bu. in 1949 and the 765 million bu. prewar average. The rye crop of the U.S.S.R., where it is a principal food grain, was indicated at 910 million bu. as against 950 million bu. in 1949 and an 885 million bu. prewar average.

Feed Grains. Feed grains were not quite so abundant in 1950, largely because of damage to the Argentinian crop early in 1950 by drought and because of reduced production of maize in the U.S. However, a record carryover of maize in the U.S. together with substantial amounts of other feed grain supplies and a record hay supply per consuming animal unit, made the problem one not of any immediate supply deficit, but rather of whether feed supplies would continue to support the expanding trend in livestock population in view of the rapid increase in livestock, particularly in the U.S. and western Europe. The maize crop for the world amounted to about 5,285 million bu., as compared with a crop of 5,580 million bu. in 1949-50 but much in excess of the prewar average of 4,750 million bu. Other feed grains—oats, barley and grain sorghums—yielded abundantly in 1950. The world oat crop was estimated at 4,230 million bu., up 5% as compared with 4,020 million bu. in 1949. Europe's 1,350 million bu. was slightly less than in 1949 and about 15% less than the prewar average. The world barley crop was estimated at 2,430 million bu., as compared with 2,260 million bu. in 1949 and nearly 100 million bu. more than the prewar average.

Exports of feed grains from the U.S. in 1949-50 were 9,669 million lb., slightly larger than in 1948-49 and more than three times the prewar average. These exports were based primarily on the record maize supply and went largely to western Europe.

Rice. The world's greatest food crop for direct human consumption, in terms of the number of consumers, is rice. In terms of total world production, it regained prewar levels; the estimated crop was 343,000 million lb. (paddy) in 1950-51, 3% larger than the 333,000 million lb. of the previous year and slightly above the prewar period. Nearly 93% of production was in Asia. The U.S. crop of 37,971,000 bags (100 lb.) was 7% less than the record crop of 1949. There were higher yields per acre in China. Moderate increases were forecast for Formosa, the Philippines, Thailand and Pakistan. Japan harvested a good crop of 25,700 million lb., smaller than the large crop of 1949-50 and slightly below the prewar average. The Korean crop apparently was a good one and most of it was harvested in spite of war. Unsettled conditions in the main surplus-producing areas of southeast Asia apparently resulted in a reduced total, though the crop of Thailand was reported as favourable.

Potatoes. The 1950-51 crop was about 8,580 million bu., 6% more than the 1949-50 crop, compared with 8,764 million bu. in 1948-49 and the 8,300 million bu. average in the prewar years 1935-39. The European crop (excluding the U.S.S.R.), in particular, increased sharply to 4,860 million bu. compared with 4,418 million bu. in 1949, and was slightly below prewar. The U.S.S.R. crop was indicated at 2,850 million bu., a little more than in 1949 and slightly above prewar. The Canadian crop, as well as that of the U.S., was again large, and was one of the chief surplus problems of the year. In spite of a record low acreage in the U.S., the 1950 crop nevertheless exceeded requirements by nearly 100 million bu.

Sugar. World production of centrifugal beet- and cane-sugar for the 1950-51 season was indicated at 35,380,000 short tons, raw value, 10% more than the record large crop of the previous year and about 22% more than the prewar (1935-39) average. In addition, there was an estimated production of 5,700,000 tons of non-centrifugal sugar, mostly in Asia and South America. World beet-sugar production, largely in

Europe, increased to 13,499,000 tons, as compared with 11,625,000 tons in 1949 and 11,027,000 tons prewar. Meanwhile, world centrifugal cane-sugar production of 21,387,000 short tons compared with 20,430,000 tons in 1949 and 17,310,000 tons prewar. Increases were rather general. Cuba increased to 6,300,000 tons from 6,126,000 tons in the previous year. Formosa showed a substantial decline, and the Philippines' production was not sufficiently restored to be able to provide all the export quota to the U.S. *Per capita* consumption continued highly divergent among the various countries, ranging from about 100 lb. *per capita* in the U.S. in 1950 to only a very few pounds *per capita* for more than one-half the world's population.

Meat. Meat supply was better in 1950, particularly of pork, poultry, high-quality beef and fish. Lamb was relatively scarce. Total meat consumption per person in the U.S. was expected to approximate 145 lb., as compared with 144 lb. in 1949, a record 155 lb. in 1947 and a prewar average of 126 lb. Lamb consumption, however, was only 95% of 1949, whereas chickens (103% of 1949) and turkeys (122%) were consumed at an increased rate. Numbers of livestock in the U.S., excepting sheep, had completed the declining phase of their cycle in 1949 and were expanding in 1950, pigs and beef cattle especially.

Because of generally improved feed conditions in 1949 and continuing favourable production in 1950, output of meat increased in most producing areas; Argentina and South Africa were hard-hit by drought and Argentine meat exports, particularly to the United Kingdom, were cut back sharply in mid-1950. As a result, the British slashed their thin meat rations to a very low level late in 1950. World cattle numbers, for beef as well as milk, were increased above the record 761 million head at the beginning of 1949. Pigs, which, together with poultry, in Europe are fed largely on potatoes and barley, increased in number. Meat exports from Canada, Australia and New Zealand continued in fair volume to western Europe, particularly to the United Kingdom.

Fats and Oils. Expansion in the production of most kinds of fats and oils continued in 1950 with consequent easing of the supply situation. Prices became much steadier after June. Although significant differences existed among areas and types, the over-all supply approximated the prewar level. On a *per capita* basis the supply continued below prewar, Germany and Japan being especially low at a consumption level about that of prewar. Production of fats and oils in the U.S. was near the 1949 record level but depended greatly on the very large soya bean crop; the cottonseed crop was only about two-thirds as large as that of 1949; pigs were marketed in larger numbers than in 1949 and at heavier weights. Palm oil and coconut oil also became available in larger amounts from tropical areas. The olive-oil crop of the Mediterranean basin was a small one. As a result, world exports of this composite item were expected to be much the same as in 1949. Exports from the U.S. were especially large, reaching in 1949-50 a record of 1,122 million lb. of edible fats and oils, including butter, as compared with the 186 million lb. prewar average.

Food Prices and Trade. Food prices, particularly those of food raw materials such as grains and fats and oils, which reached their postwar peaks in the free markets of the world early in 1948 and had subsequently declined sharply but irregularly, reversed their downward trend late in 1950, when the Korean war had become more critical but, in most cases, without reaching again the 1948 records. The over-all rise amounted to at least 10% and for a few items amounted to much more.

The bulk of food moving in world trade continued to be grains. In 1949-50, world exports of grain and grain products were about 35,800,000 metric tons, as compared with 38,100,000 tons in 1948-49; they were the largest since 1931-32, but still less than the record 40,600,000 tons moved in 1928-29. Of the 1949-50 total, about 23 million tons were bread grains. In 1949-50 (mostly from 1949 crops), grain supplies carried over at the end of the year in the four principal exporting countries increased substantially as compared with 1948-49. Exportable supplies were in surplus as compared with provisional import programme, a fact which is well-illustrated by the fact that the importing countries did not take their full quota of wheat under the International Wheat agreement, the price remaining at the maximum though well below U.S. domestic prices.

Estimated exports in 1950-51 included sugar to about 11 million short tons, of which about 80% came from the western hemisphere, as compared with less than 50% before the war. World supply and demand continued in balance despite a record crop. Prices were rather sharply up as compared with 1949, Cuban raws rising to a little below six cents a pound.

TABLE II. SUPPLIES OF MAJOR FOODSTUFFS ENTERING WORLD TRADE
(In millions of metric tons)

Commodity	*Prewar*	1946-47	1947-48	1948-49	1949-50	1950-51*
Cereals (excl. rice)	29·4	28·7	35·0	38·1	35·8	34·0
Rice (milled)	7·8	2·7	3·8	3·9	3·8	3·7
Fats and oil-seeds†	5·9	3·2	4·0	4·8	5·2	5·5
Sugar (raw basis)	11·5	8·0	9·0	10·7	10·0	11·0
Meat	1·9	1·9	2·0	1·9	2·0	1·8

* Preliminary estimate. † Fat content.

Food Situation by Areas. European food production in 1950 improved significantly. The 1950 bread grain harvests averaged above the previous year, though the Danube basin harvest probably dropped below that of 1949. The maize crop was hard-hit by drought in much of eastern Europe, and the situation in Yugoslavia was reported to be serious. Potatoes and sugar increased, as did fats and oils, livestock and dairy products. Nevertheless, the domestic food supply of Europe in 1950 was still below prewar levels, whereas the population had increased. The chief food item, bread grains, was near the prewar average. Domestic supplies of meat, dairy products and poultry were still low but were rising. Nevertheless, the situation had relaxed sufficiently to permit the abolition of most rationing in most areas, though Yugoslavia and some other Danubian countries reinstated rationing and the United Kingdom reduced its meat ration sharply because of reduction in imports from the Argentine. Stock-piles of grain were increased. A disturbing feature was the extent to which the world import requirements of food, particularly into Europe, had come to depend so overwhelmingly on the vast but unstable production of North America. Efforts at Geneva in November to secure larger quantities of grain from eastern Europe, as was the case in prewar days, were largely unsuccessful, though Great Britain before the Geneva meeting executed a contract for 800,000 tons of coarse grains from the U.S.S.R. Western Germany again increased its production.

The food situation in the U.S.S.R. appeared to be not quite so favourable as in 1949, but 1950 was almost the best of the postwar years. Root crops were good and livestock had increased.

The 1950 grain crops of Japan were about as good as in 1949, and Japan, before the Korean outbreak, was faced with the largest grain carryover in its history, partly imported. The situation in China was less clear because of warfare as well as drought and floods early in the year. Natural conditions for the rice crop, the principal cereal item of the diet were believed to have been more favourable in 1949. Civil disturbances in Burma continued to restrict the movement of the 1949 rice crop and the production of the 1950 crop.

Supplies available for export from French Indo-China continued to be small, although some increase occurred in the Siamese crop. India had local food difficulties and late in the year asked for import grains.

Food crops in the southern hemisphere harvested during 1950-51 were more than average, particularly in Australia. Serious drought in the Union of South Africa and Argentina late in 1949 and early 1950 was relieved with a good yield expected of 1950-51 crops. Exportable supplies of dairy products had increased in Australia and New Zealand, and there were also moderate increases in meat supplies from some southern hemisphere countries.

The food situation, both as to production and consumption, was excellent in North America in 1950, partly because of large crop production but more because of an increase in livestock and its products. Crops in the U.S. yielded about 132% of prewar (as compared with 152% in 1948), and livestock production was 141% of prewar. Canadian crops were larger than in 1949, though the quality of the abundant wheat crop suffered from early frost; that country began to search for wider markets for its exportable foods, even in the U.S., in the face of a cutback in contracts with the U.K.

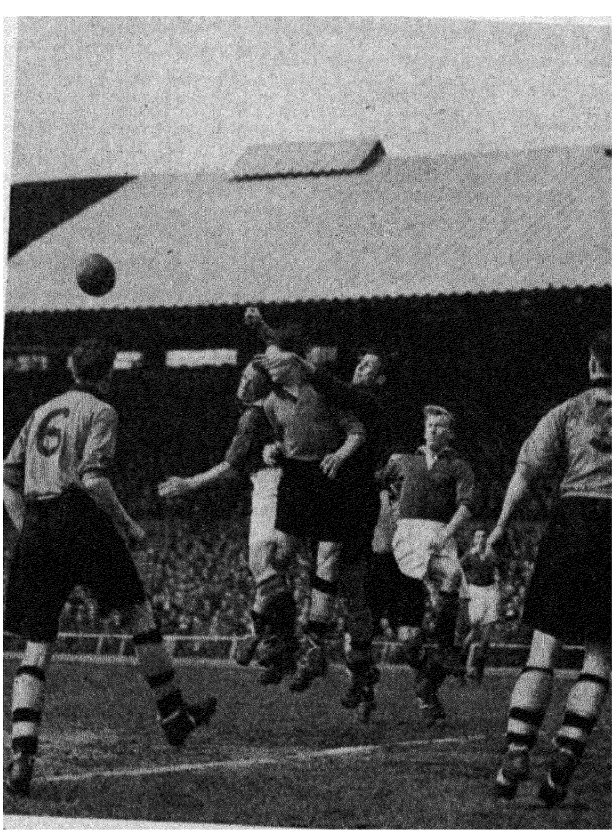
World Food Organization. The United Nations Food and Agriculture organization (F.A.O.) continued work of international importance in agriculture during 1950. Its permanent headquarters were to be moved to Rome in 1951. The results of its world census of agriculture were not yet available, but it published a special survey of world agricultural land use which indicated that of a total area of 13,406 million ha., 3,350 million ha. were in some sense agricultural, 3,523 million ha. were forests and 6,533 million ha. consisted of wasteland and other. Of the agricultural areas, 1,217 million ha. were classed as arable, the remaining 2,133 million ha. as permanent meadows and pastures. Of the world's 2,352 million total population, 1,377 million were classed as agricultural workers or their dependants.

(J. K. R.)

FOOTBALL. Association. The fourth World cup association football tournament was decided in Brazil during 1950, and Uruguay won the title for the second time after a remarkable final match in which Brazil attacked almost throughout and scored the first goal but lost 1—2. England competed for the first time, but failed to quality for the final pool after losing 0—1 to the United States and 0—1 to Spain and beating Chile 2—0. Scotland also had been invited to compete, but their entry was made subject to winning the British home international championship. In this Scotland beat Ireland 8—2 at Belfast and Wales 2—0 at Glasgow, and England beat Ireland 9—2 at Manchester and Wales 4—1 at Cardiff; in the deciding match at Hampden Park England defeated Scotland by the only goal. Ireland and Wales drew 0—0. England's chief fault in Brazil was failure to shoot hard, quickly and often, after much good play in defence and in mid-field. In international games, before the visit to Brazil, England had been extremely lucky to beat Italy 2—0 in London, mainly as a result of superb goalkeeping by B. Williams (Wolverhampton Wanderers), F. Swift's successor, and had not been convincing when beating Portugal 5—3 in Lisbon and Belgium 4—1 in Brussels. The more successful South American sides played brilliant attacking football at a great pace, and in five games before meeting Uruguay Brazil shot 21 goals against 4. Sweden did best of the European countries and finished third; Italy, winners in 1934 and 1938, failed to reach the final pool.

The Football league championship was won for the second year in succession by Portsmouth, who stayed the course better than did their rivals after Wolverhampton (second), Sunderland (third) and Manchester United (fourth) each in turn had seemed to have the prize almost in their hands. The winners had a remarkably well-balanced side with a particularly strong half-back line and an attack in which four men shot 15 or more goals each. The club remained a strong believer in local talent and did not rely on the transfer market, in which fees rose so rapidly that after Preston North End had paid the record sum of £26,000 to Sheffield Wednesday for E. Quigley, an inside forward, Sunderland paid £30,000 to Aston Villa for T. Ford, a Welsh international centre-forward. Manchester City and Birmingham City were relegated to the second division, from which Tottenham Hotspur, perhaps the most attractive side of the year, and Sheffield Wednesday were promoted. Doncaster Rovers, with P. Doherty, a very great Irish inside forward, as player-manager, and Notts County, captained by T. Lawton, a former England centre-forward, won promotion to the second division in place of Bradford and Plymouth Argyle. During the close season the number of clubs in each section of the third division was increased from 22 to 24, Colchester United, Gillingham, Scunthorpe United and Shrewsbury Town being elected. Glasgow Rangers won both the Scottish cup (for the third year in succession) and the Scottish league title, the runners-up being East Fife and Hibernian.

The F.A. cup was won by Arsenal for the third time, but they had two hard matches with Chelsea at Tottenham in a semi-final before beating Liverpool 2—0 at Wembley. Chelsea had already surprised Manchester United, one of the favourites, at Stamford Bridge, and they led Arsenal 2—0 before drawing 2—2 and lost the replay only 0—1. Liverpool beat their nearest neighbours, Everton, 2—0 in the other semi-final at Manchester. Arsenal won the cup without leaving London, for in their other four games they were drawn to play at home. The F.A. Amateur cup final at Wembley was between Bishop Auckland and Willington, whose grounds in Durham are only four miles apart; their



The Wolverhampton Wanderers goalkeeper, Sims, punching clear from a bunch of players in the first division match against Chelsea on April 15, 1950.

display before 77,000 spectators was considered by many experienced critics to be superior to that given by many F. A. cup finalists, and Willington's 4—0 margin of victory hardly did justice to the losers. England and Scotland drew 0—0 in their amateur international and Oxford and Cambridge drew 2—2 in the university game.

Much excitement was caused among Football league enthusiasts during the summer when N. Franklin, Stoke City and England centre-half, was the first of a small group of British professionals to join professional clubs in Bogotá, Colombia, for signing-on fees and other emoluments much higher than those permitted in the Football league, without obtaining the approval of the Football association, the Football league, or their clubs and without a transfer fee's being paid by the Bogotá clubs, who had broken away from the Colombian F.A. and the rules of the international federation. Some of these players, amongst them Franklin, soon found that all was not so simple and happy as they had imagined, returned to England and sought reinstatement. A joint commission of the Football association and the Football league suspended Franklin until Feb. 1, 1951.

Rugby Union. A Rugby union team drawn from all parts of the British Isles visited New Zealand and Australia in 1950 and had a most successful and happy tour. New Zealand won three of the four international games by 8—0, 6—3 and 11—8 after drawing in the first 9—9, but had to fight all the way; and it was generally agreed that the British back-play was superior to anything the home sides produced. For some years the tendency in New Zealand had been to specialize in forward play, but long before the end of the tour it was J. W. Kyle of Ireland and B. L. Williams, J. Matthews, K. Jones and Lewis Jones of Wales who had won the hearts of both young and old spectators. The team's final record in New Zealand was: played 23, won 17, drawn 1, lost 5; points for 420, points against 162. In Australia the British team won the two international matches 14—6 and 24—3 and had the following record: played 6, won 5, lost 1; points for 150, points against 52. The team was managed by L. B. Osborne, was captained by K. Mullen, the Irish hooker, and included 14 Welshmen, 9 Irishmen, 5 Scots and 3 Englishmen, a reflection of the dominance Ireland and Wales in turn had had in the previous three home seasons.

Wales, indeed, won the mythical Triple Crown in 1950 for the first time since 1911 and also beat France. It was soon clear that Wales not only had a hard, fast and efficient pack, brilliantly led by her captain, J. A. Gwilliam (Newport), but had found a capable successor to Haydn Tanner in R. Willis (Cardiff) and two young outsides in Lewis Jones and M. C. Thomas (Devonport Services) who could play in almost any position behind the scrum and made up for the inability of B. L. Williams to play because of injury. Wales beat England 11—5 at Twickenham and Scotland 12—0 at Swansea, and then, in the crucial match at Belfast, Matthews's speed in punishing wild Irish passes enabled Wales to win 6—3 after a draw had seemed certain. Finally France was beaten 21—0 at Cardiff. The joy of this long overdue triumph was damped, however, by an air disaster in which 78 Welsh supporters returning from Ireland were killed. Ireland still had Kyle and a fine pack, but an injury to W. D. McKee early in the game at Twickenham and another to Henderson robbed them of their only two top-class three-quarters. They drew with France and lost by the only try to England, but routed Scotland 21—0. England lost 3—6 in Paris and then was beaten 13—11 in an exciting Calcutta cup match at Murrayfield, where Scotland had already beaten France 8—5. England's consolation was the fine play of J. V. Smith (Cambridge university) on the wing in game after game; unfortunately neither he nor Gwilliam was able to go on the Australasian tour.



The British Isles rugby union team in Australia seen here playing against a Metropolitan team at Sydney, Aug. 1950. With the ball is N. Henderson (Great Britain).

The county championship was won by Cheshire for the first time. Their strength lay in a powerful pack, led by J. T. Bartlett, excellent teamwork in defence and the goal-kicking of R. Uren. Lancashire, the holders, had not recovered from the effects of the retirement of J. Heaton, and in the final East Midlands lost 0—5 in spite of having a good pack and what was thought to be a dangerous back-division.

During New Zealand's tour of South Africa in 1949, when the home side won all four international games, the South Africans used an unusual method of hooking and heeling in a 3-4-1 scrum. The outside men of the second row pushed towards the hooker from a wide angle and the ball was hooked between the feet of the outside man of the front row on the near side and emerged from the scrum at high speed between the first and second men of the second row on the near side. Many New Zealand packs adopted this system and the British touring team learned it in New Zealand and used it successfully in Australia. There was argument in England as to whether this method complied with the laws of the game as laid down by the Rugby Football union, and in view of the coming South African visit to the British Isles in 1951-52 many felt that the position needed clarification by the international board.

Rugby League. The 1949-50 Rugby league season was a notable one in many ways. Great Britain's touring team in Australasia, apparently faster and cleverer than Australia's began the tour with a string of good wins and won the first test at Sydney 4—2. Then a series of injuries and some unhappy misunderstandings with referees in Queensland upset the rhythm of the side, and the second test at Brisbane was lost 3—15. The team did better again on its return to New South Wales, but a particularly heavy and strong Australian side won the third test 5—3 in bad conditions at Sydney, and so Australia won the rubber for the first time since 1920. New Zealand confirmed the good form they had shown during her British tour of 1947 and won the two tests 16—10 and 20—13. The British team's record for the tour was: played 25, won 19, lost 6; points for 764, points against 266.

Meanwhile the Wigan club had finished at the top of the Northern league table but was faced with the task of playing the semi-final and final rounds without eight regular players,

the club's record contribution to the touring party. Halifax were beaten in a replay at Halifax and then in the final on the Manchester City ground the reserves rose to the occasion so well that they routed Huddersfield, the holders, by 20—2. As the touring party did not return for the first six weeks of the new season the reserves continued to do duty and during this period won every league and county cup match by keeping to the club's policy of open attacking football. Wigan also retained the Lancashire cup for the fourth year and won the Lancashire league, but their hopes of winning all four major trophies were dashed by a 7—2 defeat by Leeds at Headingley on a very wet and heavy pitch in the second round of the Rugby League Challenge cup competition; this trophy was won by Warrington, who beat Widnes 19—0 in the final at Wembley before 94,272 spectators who paid the record amount of £24,782. The home international season resulted in England's beating Wales and France, Other Nationalities' beating England and Wales, Wales's beating France, and France's beating Other Nationalities. England was first on points average and France last.

During the season a new Welsh league of eight clubs was in action in south Wales and received considerable help from northern clubs and the Rugby League council. Transfer and signing-on fees rose to new heights and in one month Leigh paid £5,000 for the transfer of J. Egan, captain and hooker for Wigan, England and Great Britain, and £5,000 for T. Allan, Australia's Rugby union captain and centre three-quarter. (L. M.)

United States. Navy's surprise defeat of Army, which had last previously been beaten (by Notre Dame) in 1947 left Oklahoma and Princeton as the only two teams playing major schedules with perfect records for the 1950 season. Oklahoma was ranked first in the national polls of the Associated Press. The vote was taken prior to Army's defeat by Navy, and Army eleven was placed second. Then followed Texas, Tennessee, California, Princeton, Kentucky, Michigan State, Michigan and Clemson. The final poll of the United Press, taken among coaches after the cadets were beaten, rated the teams in this order: Oklahoma, Texas, Tennessee, California, Army, Michigan, Kentucky, Princeton, Michigan State and Ohio State.

Princeton won the Ivy league honours, defeated Harvard and Yale by record scores to become the second team in history to take Big Three honours for four successive years, and ousted army as the winner of the Lambert trophy. Oklahoma retained the Big Seven championship and Michigan won the Big Ten championship.

In professional football, the All-America conference, after four years of operation, went out of existence at the end of the 1949 season and the National Football league had the field all to itself in 1950. The league was divided into the National and American conferences, instead of Eastern and Western divisions as previously. The New York Giants and the Cleveland Browns tied for first place in the American conference, the Browns winning the play-off, and the Chicago Bears and the Los Angeles Rams tied in the National conference, the Rams winning the play-off. In the final play-off between the two conference winners for the league championship, the Browns defeated the Rams.

In Canada the Toronto Argonauts won the Canadian football championship for the eighth time when they defeated the Winnipeg Blue Bombers, 13-0. The University of Western Ontario Mustangs won the college championship for the second successive year, defeating the McGill Redmen in a play-off, 24-2. (A. DA.)

FORAGE CROPS. In the United Kingdom the 1950 season for forage crops was in marked contrast to the drought of the previous year.

FORAGE CROPS IN THE UNITED KINGDOM

	Acreage (thousand acres)			Production (thousand tons)		
	1939	1949	1950	1939	1949	1950*
Beans (for fodder)	135	110	117	111	89	97
Peas (for fodder)	37	36	37	23	24	25
Turnips and swedes	712	644	599	10,084	9,190	9,126
Mangolds	216	275	277	4,069	5,321	6,352
Other fodder crops (kale, cabbage, etc.)	258	424	481	—	—	—
Temporary grassland (clover and rotational grasses):						
for mowing	1,902	2,937	2,754†	2,588	4,394	4,059
for grazing	2,191	2,789	2,777†	—	—	—
Permanent grassland:						
for mowing	5,009	2,941	3,074	5,202	3,111	3,306
for grazing	13,764	9,746	9,696	—	—	—
Rough grazing	16,539	17,192	17,103	—	—	—

* Subject to revision. † Excludes 74,000 ac. of lucerne.
SOURCE: Ministry of Agriculture.

Though yields were officially estimated to have been above the average the hay harvest, particularly in the western regions of the country, was very difficult, and losses in quantity and feeding value were heavy. A shortage of good hay was especially serious because the requirements of the livestock population were in 1950 hardly less than they had been before World War II, while the supplies of concentrated feeding stuffs (for instance those rich in proteins) were much reduced. There were reports that more silage was produced in 1950 than in the previous year.

In early 1950 the Ministry of Agriculture extended the scheme of grants and loans for co-operative grass-drying projects undertaken by farmers' co-operative societies and similar organizations so as to include projects operating by June 1, 1951. Grants were authorized up to one-third, and loans up to a further one-third, of the approved capital cost.

The season was excellent for grazing; and dairy cows and fattening cattle thrived for most of the summer. By September, however, many farmers were becoming increasingly anxious about the damage done to the sodden fields by treading. Their efforts to reduce the level of stocking probably accentuated the very heavy marketings of stock in the late summer. Turnips, swedes, mangolds and green fodder crops in general grew well; and yields per acre were estimated to be above the average. But their value as "cleaning" crops was somewhat reduced since control of weeds was difficult.

In addition to the produce of crops grown specifically for consumption by livestock, the leaves and tops of sugar beet added about 3 million tons to the forage supply. The need to retain these by-products in good condition had always been stressed in connection with the mechanization of beet harvesting. (K. E. H.)

FORESTRY. Government control of all felling of trees for timber in Great Britain was continued throughout 1950 but the issue of felling licences was transferred from the Board of Trade to the Forestry commission. Due to heavy overfelling from 1939 to 1949, the total volume of timber licensed to be felled in 1950 was strictly limited and this caused hardship to many country sawmillers.

The "dedication" scheme for private woodlands was at last given the support of the English and Scottish Forestry societies but progress was slow, and less than 100,000 ac. were dedicated during the year from the 2½ million ac. estimated by the Forestry commission to be suitable.

The large areas in Great Britain of young coniferous plantations between 15 and 25 years of age required urgent thinning. The problem of providing the labour and equipment necessary for the felling, extraction and marketing of the

pitprops and poles from these thinnings received much attention but a satisfactory solution was not found.

During the year the Forestry commission offered special grants for the planting of poplars for timber. The governments of France, Italy and Belgium had long encouraged poplar planting on suitable sites, particularly along riverbanks and roadsides. This considerably altered the general landscape, particularly in northern Belgium and in the Rhône valley in France; but it appeared doubtful if plantations of poplars would ever be seen on the same scale in Great Britain.

The " Dutch " elm disease continued to spread over several southern and midland English counties during the year and induced the felling of much hedgerow timber. Disease-resistant varieties of elm were imported from the continent during the year and it was hoped that elm would not disappear from the countryside.

The new Imperial Forestry institute at Oxford was opened by Princess Margaret in October. This building had long been needed as a centre of education and research for British and commonwealth forestry. The panelling and main woodwork in the institute, which was contributed by the various commonwealth countries and from Great Britain, provided a unique display of decorative and representative timbers.

Commonwealth. A special forestry conference in Australia called attention to the need for a more adequate knowledge of the forest resources of the country. Aerial photography was increasingly used for the mapping of forest types, and research was continued in the identification of eucalyptus species from air photographs. Owing to the serious forest fires in previous years in Australia, special protective measures were introduced and public interest in fire protection was aroused by films and other methods of propaganda.

In both east and west Africa there was considerable progress during the year in the use and export of the lesser-known " secondary " tropical hardwoods. This was largely due to the tests carried out by the Forest Products Research laboratory, at Princes Risborough, England, which convinced the timber trade that many of the new timbers could be marketed.

In Tanganyika the granting of large forest concessions for timber exploitation, under the strict condition that the areas would be completely regenerated, was one of the chief events of the year. The Colonial Development corporation acquired 30,000 ac. for a wattle-growing scheme which was expected to revolutionize the economy of that part of Tanganyika. Both Europeans and Africans would be encouraged by the scheme to plant wattle.

In Kenya a forestry commission was established with complete financial responsibility for developing the existing forests and for the planting of large areas of exotic species, and in Southern Rhodesia a comprehensive forest act was passed which should greatly facilitate the future settlement and management of the forests.

Important developments in the opening up of new forest areas were recorded from British Guiana by the Colonial Development corporation and logging operations were started. The pine forests of British Honduras were put under more intensive operation and up-to-date machinery introduced to improve output.

In Canada a forestry act was passed providing for the establishment of national forests and forest experimental areas, and also for financial help for improved forest management in the provinces. Special measures were taken during 1950 to reduce the existing wastage of timber. A new society, the Canadian Institute of Forest Products, was formed to promote more efficient utilization of wood and other forest products and also to provide or exchange information on forest utilization problems. The systematic salvage of pulpwood, sunk in the beds of rivers during floating operations, was organized in eastern Canada. In Rocky river, shelter bay, Quebec, a large volume of timber was recovered during the year, both by " sounding " with long poles operated from rafts and also by " mining " with bulldozers travelling along the mud banks when the river was at its lowest level. The bulldozers loosened and released the buried pulpwood bolts by removing the overburden of silt. Research in fire control methods and fire-hazard studies produced important results during the year. Forest Air Survey publications also showed new developments in this field of research.

Europe. Owing to the great damage done by bark beetles in central European coniferous forests in 1947-50, special efforts were made to limit the damage by felling the trees attacked and also to destroy or trap the beetles. A new type of bark-beetle trap was patented in Czechoslovakia, based on the principle that if a flying beetle hits a pane of glass it drops straight to the ground. A metal tray was fitted below the glass and filled with water, in which the fallen beetles drowned.

In Germany, reparation fellings were discontinued during the year in the western zones. Timber felling in the eastern zone during 1950 was restricted to 92% of the 1949 cut, and the planting of 80,000 ha. was planned. Fast-growing poplars were used to a great extent and special nurseries were established for their propagation. Afforestation in Greece steadily increased during 1947-50 and 75 state-operated nurseries were established to supply the necessary transplants. Forty-five million trees were supplied from these nurseries during 1949 and 1950.

The planting of tree windbreaks was started on a large scale in the arid regions of southwestern Rumania to protect farmlands from wind erosion and roads and railways from snow drifts. A four-year plan was laid down and the training of the necessary experts was begun during the year.

A new type of mechanically operated cableway for timber extraction from mountainous forests was invented in Switzerland during World War II and was later widely used for softwood extraction in several European countries and in Canada. In 1950 a heavier type of machine was produced and at the end of the year this new " Wyssen " system was being installed in Africa. It was thought it might enable extensive areas of tropical hardwood forests, which were formerly considered to be economically inaccessible, to be exploited.

U.S.S.R. Aerial forest surveys had been much used for determining the extent, location and character of the vast unexplored forests of the U.S.S.R. and, up to 1950, about 410 million ha. of forests had been covered by the surveys. The survey of the forests in the basins of the Mezen and the Pechora in the European part of the union was completed. Experiments to determine the possibility of large-scale planting of eucalypts for timber production and essential oils showed successful results in the Uzbek republic and an important three-year planting scheme was started.

(A. H. LD.)

United States. The society of American Foresters observed its 50th anniversary in 1950. In 1900 there were only a handful of American foresters; in 1950 the society had a membership of more than 6,000 professional foresters.

By executive order, President Truman in January established a water resources policy commission to " study and make recommendations to the President with respect to Federal responsibility for and participation in the development and conservation of water resources, including related land uses and other public purposes to the extent that they are directly concerned with water resources." The commission gave much attention to forests and forestry in their relation to water supply and control of run-off. Reports on forest

conditions in the major watersheds were prepared by the forest service for its study.

Work was begun during the year on the rehabilitation of the vast Tillamook burn area in northwestern Oregon. Reafforestation and development of this area was authorized by the state legislature. More than 250,000 ac. of heavily timbered land in Tillamook county, Oregon, was burned over in 1933 in one of the biggest forest fires of recent times. Much of the same area was ravaged by fire again in 1939 and 1945. The rehabilitation programme called for ultimate expenditure of about $10 million.

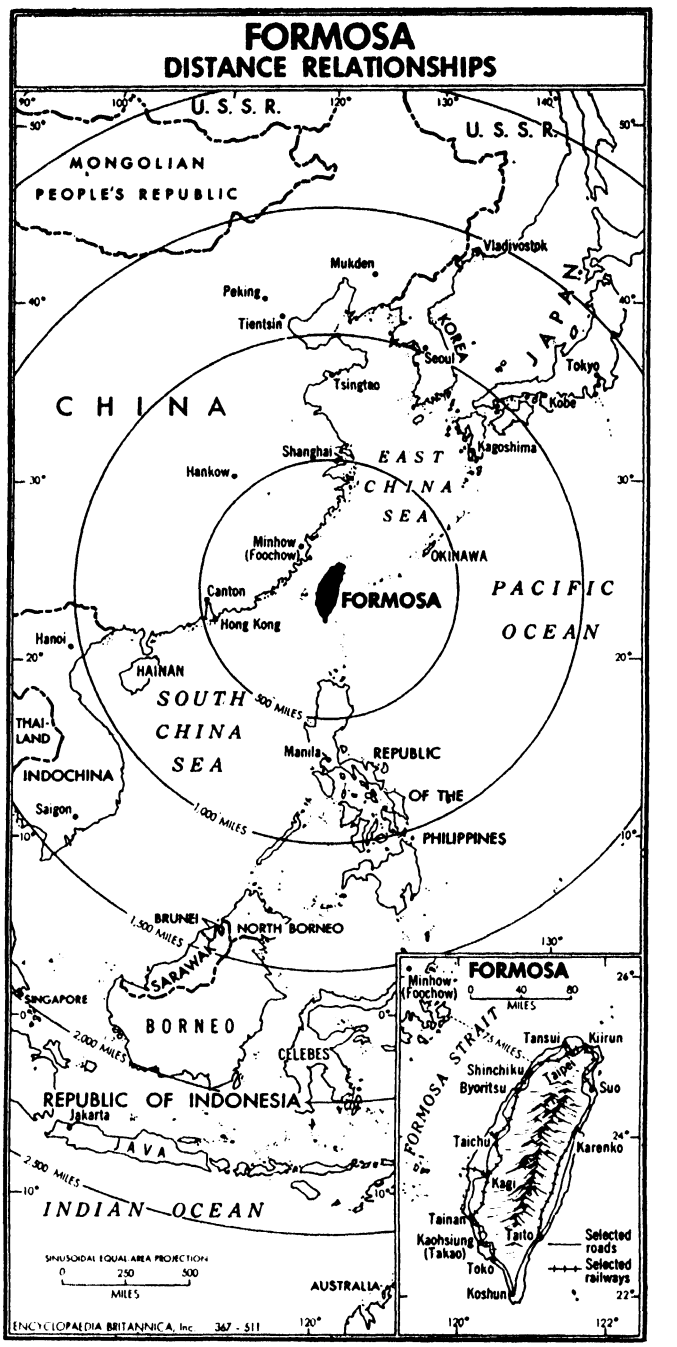
The United States congress enacted the Co-operative Forest Management act, which authorizes the secretary of agriculture to co-operate with state forestry agencies in providing technical services to private forest land owners and to processors of primary forest products. The area of national forests and other conservation lands under the administration of the forest service on June 30, 1950, totalled 181,204,638 ac. During the fiscal year to June 30, 1950, 26,907 timber sales were made. The cut of national forest timber amounted to 3,501,937,000 bd. ft. A total of 45,428 ac. of national forest land, mainly areas denuded by past fires, was replanted during the year. (*See* also NATIONAL PARKS; SOIL CONSERVATION; TIMBER.) (C. E. R.)

FORMOSA (TAIWAN). Large island in the western Pacific separated from China by the 90 mi.-wide Straits of Formosa. Area: 14,589 sq.mi., including Pescadores and neighbouring islands. Pop.: (1940 census) 5,872,084; (mid-1950 est.) 7,500,000, including Chinese Nationalist troops and refugees from the mainland. Language: mainly Chinese. Religion: Buddhist, Confucian and Taoist. Chief towns (pop., 1940 census): Taipei (formerly Taihoku, cap., 326,407); Kaohsiung (Takao, 152,265); Tainan (142,133) and Chilung (Keelung or Kiirun, 100,511). Governor, Wu Kuo-cheng (K. C. Wu).

History. Formosa, the only territory remaining under the control of the Chinese Nationalist government after the conquest of the mainland by the Chinese Communists, was converted into a military stronghold. On March 1 Generalissimo Chiang Kai-shek (*q.v.*) formally reassumed the presidency of Nationalist China; on March 7 he appointed General Chen Cheng as prime minister in succession to Marshal Yen Hsi-shan; on March 16 he took over the supreme command of the Nationalist armed forces.

To clarify the position of the U.S. government on the question of giving Formosa aid for its defence against the Chinese Communists, President Harry S. Truman issued a statement on Jan. 5, 1950, which said that the United States would not interfere in any conflict between the Communist and Nationalist governments and that the United States would not provide military aid to the Nationalist forces on Formosa. As a result of the Communist invasion of the Republic of Korea, however, President Truman on June 27, 1950, ordered the U.S. navy to prevent any Communist attack on Formosa since it would endanger the security of U.S. forces in the far east. At the same time the president called upon the Chinese Nationalist government to cease all operations against the Communist-held mainland. He also stated the U.S. government's position that " the determination of the future status of Formosa must await the restoration of security in the Pacific, a peace settlement with Japan, or consideration by the United Nations."

On Aug. 1-2 General Douglas MacArthur, the supreme commander of the U.N. forces in Korea, visited Chiang Kai-shek at Taipeh. (*See* also CHINA.)



Industry. Production (1950 est., '000 metric tons unless otherwise stated): coal 1,630; cement 400; chemical fertilizers 60; cotton yarn 2·2; cotton cloth 10,551,000 m.; electricity 1,000 million kwh.

Foreign Trade. Chief exports were sugar, coal, salt, cement, tea and fruits. The chief imports were raw cotton and machinery. In 1949 exports amounted to the equivalent of U.S.$ 33·9 million, imports to U.S.$ 26 million, excluding E.C.A. aid. During the first eight months of 1950, exports totalled U.S.$ 60·9 million and imports U.S.$ 51·8 million.

Finance. Budget (1949 est., million N.T.Y.): revenue 80, expenditure 74. Monetary unit: *New Taiwan yuan.* Note circulation (Oct. 31, 1950): N.T.Y. 223 million. (S. NR.; X.)

Agriculture. Main crops, (1950 est., '000 metric tons): rice 1,400; refined sugar and products 613; tea 14; pineapples 49; bananas 128; citrus fruits 29; tobacco 6; jute 18; sweet potatoes 2,350; peanuts 65.

FOSTER, WILLIAM CHAPMAN, U.S. administrator for economic co-operation, (b. Westfield, New Jersey, April 27, 1897), studied at the Massachusetts Institute of Technology, served as a pilot in the U.S. army air force in World War I, entered business and became president of the Pressed and Welded Steel Products corporation. He served as a civilian assistant in the war department during World War II, and on Nov. 29, 1946, was appointed under secretary

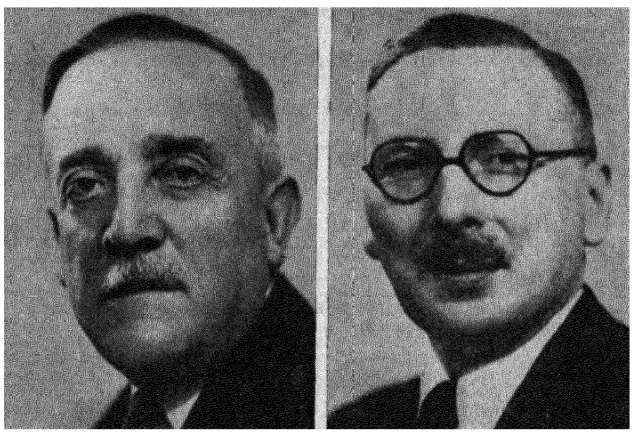
of commerce. In April 1948 he became deputy to William Averell Harriman, who was the U.S. special representative in Europe of the Economic Co-operation administration. On May 31, 1949, he was appointed deputy E.C.A. administrator, and when the administrator, Paul G. Hoffman, resigned on Sept. 30, 1950, President Harry S. Truman chose Foster to succeed him.

FRANCE. Republic of western Europe bounded N. by the English channel, E. by Belgium, Luxembourg, Germany, Switzerland and Italy, S. by the Mediterranean sea, S.W. by Spain and W. by the Atlantic ocean. Area: 213,010 sq.mi., including the Mediterranean island of Corsica (3,367 sq.mi.) and small Alpine territories ceded by Italy in 1947 (273 sq.mi.). Pop.: (1946 census) 40,502,513, excluding members of armed forces and crews of the commercial navy abroad and the personnel of the military government in Germany and Austria (312,100), but including resident foreigners (1,670,621); (Dec. 31, 1949 est.) 42,000,000. Language: French is almost universally spoken but there are also other regional languages or dialects: German in Alsace and part of Lorraine; Breton in Brittany; Flemish in the northern corner of the Nord *département;* Provençal in the Alpes Maritimes, Basses-Alpes, Var and Bouches-du-Rhône *départements;* Catalan in Roussillon (Pyrénées Orientales); Basque south of Bayonne, and Italian in Corsica. Religion: mainly Roman Catholic with *c.* one million Protestants and over 230,000 Jews. Chief towns (pop., 1946 census): Paris (cap., 2,725,374); Marseilles (636,264); Lyons (460,748); Toulouse (264,411); Bordeaux (253,751); Nice (211,165); Nantes (200,265). President of the republic, Vincent Auriol; prime ministers in 1950, Georges Bidault, Henri Queuille (June 30—July 10) and René Pleven (*q.v.*).

History. When the year 1950 opened the main preoccupation of French public men was still the stabilization of national economy, which had almost been achieved, but the struggle with Communism at home, which in the first half of the year took violent forms both inside and outside parliament, was from the start a powerful second preoccupation; in the course of the year it merged with the dominant one of peace and war. French foreign policy was marked by a series of initiatives for the creation of supra-national forms of organizations either in connection with the North Atlantic treaty or with the Council of Europe. The anxiety of France to strengthen militarily both itself and the alliances of which it was a member was paralleled by its desire to avoid any step that might increase the danger of war.

In spite of these dominant preoccupations France's governments had constantly to struggle to maintain their majorities, which were usually narrow. After the Communists left the government in the spring of 1947 all governments had to rely on a majority extending from the Socialists to the "moderate republicans" or Conservatives. The parties of this majority were necessarily preoccupied with the elections which could not occur later than Oct.1951 and in which the Socialists would be disputing votes with the Communists, while the Christian Democrats (M.R.P.) would have to fight the right-wing Party of Republican Liberty and the Gaullists with their programme of presidential government. The Socialists were necessarily concerned with wage levels, the right wing of the coalition with keeping down taxes. Other issues dividing the coalition were electoral reform, the Catholic schools question and "the case of the generals."

The Bidault government's hope of getting a skeleton budget (that is, prescribing the maximum to be spent by each ministry) through parliament by Jan. 1 had to be abandoned because of resistance to the government's proposals, and a "provisional twelfth" was voted for January. This skeleton budget was passed by the meagre majority of 300 to 284 on



Georges Bidault was prime minister of France when 1950 began. He resigned in June and was followed by Henri Queuille (left), who was succeeded in July by René Pleven (right).

Jan. 31; the detailed examination of credits for each ministry was left till later. The government struggled through with majorities of two and four and once with a drawn vote. Already a new difficulty loomed up, namely, the Socialist demand made on Jan. 6 for a second "non-recurring" wage bonus to make up for the fact that there was delay in passing the bill restoring collective bargaining. The government's decision that such a bonus should be spread over three months led to the Socialists' resignation from the cabinet on Feb. 3. This did not mean, their leaders stated, going over to the opposition, but the party abstained when faced with Bidault's repatched government, which therefore got a majority of only 225 to 185 on Feb. 7.

Similar problems, namely the rise in the cost of living and a demand for the regrading of officials' salaries, finally led the Socialists to vote against the government at the end of June. They did not participate in the abortive Queuille government against which they voted on the ground that the right was too strongly represented. The Socialists returned to office in the Pleven government which was formed after a mission for investigation and negotiation between the parties had been entrusted by President Auriol to Guy Mollet, the secretary general of the Socialist party. This unusual method of preparing the solution of the crisis was adopted because the Socialists were responsible for successive crises, but a Socialist premier would not have been acceptable to other parties. Pleven accepted a salary-regarding scheme very close to the Socialists' demands and promised to loosen the deflationary screws.

Electoral Reform. Proposals for electoral reform and the Catholic schools question were linked, since in both cases it was the M.R.P. which was at variance with its coalition partners. Flanked by two anticlerical parties, the Socialists and Radicals, the M.R.P. was unable to secure concessions interesting its Catholic supporters from either and considered that the Socialists ill repayed their solidarity with them in social reforms and nationalizations. Unable to force concessions in the Catholic schools question, the M.R.P. could at least block the demand for the abandonment of the present system of proportional representation. This system suited the Communists and the M.R.P. who together had a majority in the National Assembly. The right wing of the coalition and the Socialists would have liked to see a return to something similar to the prewar single-member constituencies, with a second ballot whenever no candidate gained an absolute majority at the first. This system would be unfavourable to parties whose supporters were widely but often thinly spread in the country (M.R.P. and Communists), but it was the system that would most favour the centre of the

Assembly against its two extremes. The leaders of the M.R.P. tried to induce their followers to accept a compromise, but the back-benchers, knowing that theirs were the seats most threatened by Gaullists, were hard to persuade. Meanwhile the Radicals, a much smaller group but essential to any majority, insisted on the inclusion of electoral reform in the government's programme as a necessary step to the reduction of Communist parliamentary representation. Paul Reynaud (right Independent) called it a matter of national defence.

The "Case of the Generals." Relations between the M.R.P. and the Socialists were also strained by the "case of the generals," a scandal which became public property in Jan. 1950, although the government's attention had been drawn to it from the end of Aug. 1949. General Georges Revers, chief of the general staff of the army, had been sent in the summer of 1949 to Indo-China to examine the situation. His report had been both political and military. Parts of the former section at least were being broadcast in August from a transmitter somewhere in Burma run by the Communist-led opponents of the French in Indo-China. At the time something like a campaign was being conducted in Paris by General Revers and his friend General Charles Mast to secure the nomination of the latter as both commander in chief and high commissioner in Indo-China. It soon came to light that the report or at least a part of it reached through unauthorized channels both the Vietnamese who were favourable to France and those who were fighting her. It was established in September that in both cases it passed through the hands of Roger Peyré, who was a textile middleman, an occasional agent of one of the French secret services and a dabbler in politics. He had become a confidential adviser on politics to General Revers, who had not made sufficient enquiries into his varied past, supposed him possessed of almost supernatural influence in politics and had secured for him the Legion of Honour. To avoid scandal touching a highly placed general it was decided by Queuille, the prime minister, Paul Ramadier, the minister for national defence and Jules Moch (*q.v.*), the minister of the interior, to put an end to proceedings on the ground that only the political and not the military part of the report had leaked out and that therefore there was no case for a prosecution for espionage against Peyré. The *Sûreté* stopped their investigation but not before Peyré, to cover himself, made allegations (almost certainly untrue) of having paid large sums to various highly placed persons. Further decisions were delayed by the long cabinet crisis of Oct. 1949 and General Revers was replaced by General Clément Blanc only at the beginning of December. Peyré meanwhile got away to Brazil.

The whole story came out in January as a result of the investigations of the correspondent of the U.S. weekly newspaper *Time*. Bidault made a statement to the Assembly on Jan. 17 and described Peyré's confidential relations to the two generals as a disgrace. A parliamentary commission of enquiry of 12 was set up. After its Communist member had for several days made its proceedings and the documents before it public, the commission decided to make them public itself. There was no serious evidence that the generals were corrupt. Lists came to light of deputies to be entertained by the representative of one of the Vietnamese pro-French political groups who had evidently disposed of large funds and had been in contact with Peyré. This was exploited as evidence of corruption, with no justification. There was a glimpse of transactions in Indo-China piastres by various persons but only a special enquiry could have decided on their legality or propriety. Peyré turned out to be a much less important person than General Revers had supposed, but he had unfortunately been recommended by a Socialist trade union leader, whose numerous business activities, though in no way shown to be improper, seemed inappropriate. The particular police service which had employed Peyré had a Socialist director general, who however had probably not heard of him. The two ministers responsible for recommending to Queuille the suppression of the whole affair in September were Socialists. An intolerable state of overlapping, rivalry and petty warfare between different police services was revealed for which some Socialist responsibility could not altogether be denied. Some of the evidence before the commission was provided by the M.R.P.

A member of the latter party drafted the commission's report. The Socialist party was inclined to treat the whole affair as an unjustifiable attack on themselves and relations between the parties suffered. A preliminary debate on May 5 led the Assembly to affirm that Queuille and Ramadier had been guided exclusively by considerations of public interest. The two generals, who had already been relieved of all their posts, were retired on June 21. The case of Moch, who had insisted on fully covering his subordinates, whose errors he claimed were merely the result of action at great speed, did not come up until the commission's report was debated in the National Assembly at the end of November, by which time Moch was minister of national defence. Apart from the now vain attempt to prosecute the absent Peyré on various charges including traffic in influence the report recommended further enquiry into the procedure of the police in September and a complete reorganization of the French intelligence services. By an ingenious use of parliamentary procedure the Communists brought before the Assembly on Nov. 28, under rules which excluded debate and prescribed a secret vote, a motion calling for Moch's trial by the High Court. Moch was as unpopular with the Gaullists as with the Communists and had been much criticized for recent rigid conduct of negotiations at New York on German rearmament. Some 90 deputies of the right and centre including a number of the M.R.P. voted against Moch while others abstained. In consequence 235 voted for the Communist motion and only 203 against. A vote of 283 was constitutionally necessary to give it effect, but its political consequences were none the less serious. The government resigned in solidarity with one of its principal members. The president refused the resignation and suggested that Pleven ask for an expression of the Assembly's confidence. On Dec. 1, the Assembly voted a motion of confidence in the government and of moral reparation to Moch by 347 to 184.

Communist Activities. Down to the Communist party congress in April, the party's propaganda called on the workers to interfere with arms transports to Indo-China, with the importation of arms and with their manufacture. To begin with, this propaganda had some notable results. Strike action in Marseilles delayed the departure of a troopship for Indo-China during two days (Jan. 10-11). On Feb. 14 two thousand workers at Nice abandoned their jobs, concentrated on the port, rushed a police guard of 200 and pushed huge crates containing parts of a V2 ramp over the quayside. (It was alleged they were to be sent to Yugoslavia whereas they were being sent to a practice range in the Sahara). But the Communists did not control every port. The Cherbourg dockers declared their readiness to load and unload arms. In Marseilles the Communists soon lost control of the port workers. The government everywhere took energetic measures reinforcing the port police and using troops to load and unload arms when the dockers refused. The new scale of penalties for sabotaging national defence rendered them more easily applicable. The first shipload of U.S. arms was unloaded at Cherbourg on April 13 without any hitch. About this time Communist activity suddenly took a new turn, being directed against newspapers that the party disliked, principally the *Figaro*, and newspapers kiosks that sold them. This campaign also dwindled away. For the rest of the year Communist

external activity was mainly directed to the "peace campaign." Within the party right through the year a thorough overhaul was in progress, a stiffening of discipline and preparation for battle. Maurice Thorez, the secretary general denounced scornfully the shortcomings of important local organization. There was a great deal of "self-criticism" at the party congress held during April 2-5. Party propaganda steadily built up the authority of Thorez. He suffered a light stroke on Oct. 12 and for a short time was partially paralysed. On Nov. 11 a Soviet aircraft was sent to take him for treatment in the Soviet Union.

On April 28 the French government dismissed Frédéric Joliot-Curie from his post of high commissioner for atomic energy because of his membership of the Communist party. On two occasions the French government took massive action against foreign Communists in France. In Dec. 1949 and Jan. and Feb. 1950 arrests of Frenchmen in Poland were made the occasion for expulsions of Polish Communists and dissolutions of many Communist-controlled Polish organizations. In September 404 foreign Communists were expelled or (in the case of Spaniards who did not wish to go to Soviet-controlled territories) assigned residence in Corsica and Algeria. A number of foreign-language Communist newspapers in Polish, Spanish and Armenian were banned. French planning to deal with the potential Communist fifth column was pushed ahead during the year. Moch told the Assembly on July 25 that as part of the mobilization the gendarmerie would have to be increased four- or five-fold.

The failure of the Communists to achieve more by direct action in the first half of the year was the more remarkable because the return after ten years to collective bargaining (without compulsory arbitration as the government had wished) led to a number of serious strikes in the process of normalization. The 37,000 employees of the nationalized Renault works started a strike in the metallurgical industry on Feb. 20 which dragged on for six weeks. The Michelin and Bergougnan tyre factories were on strike at Clermont-Ferrand for two months. A building strike at Brest led to riots and a fatal casualty as well as the arrest of two Communist deputies. Less serious though more noticed were short municipal transport, gas and electricity strikes. On the whole these strikes remained of an industrial character.

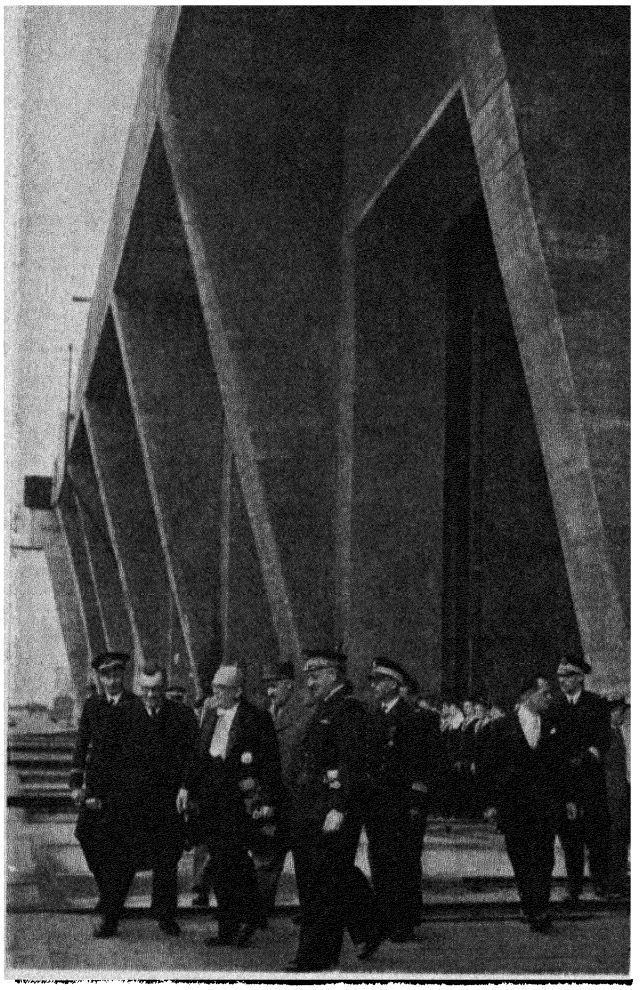
Foreign Policy. The year opened with a bitter dispute in progress between France and Poland about the arrests and expulsions of nationals and consular officials in the two countries. This was followed by the first grave diplomatic incident between France and the Soviet Union. Moscow recognized Ho Chi Minh (*q.v.*) as head of an independent Vietnam. France protested vigorously by a note to the Soviet ambassador, who sent it back by messenger boy. Schuman repeated the protest verbally to the ambassador in an interview lasting four minutes. That France was seeking means to improve its relations with Western Germany, the natural corollary of worsening relations with the Soviet Union, was made evident by Schuman's decision to visit Bonn and Berlin. The moment chosen turned out to be one when Franco-German relations were at least superficially strained. The negotiations for a Franco-Saar economic agreement (*see* SAAR) were approaching their conclusion and German speeches on the subject aroused anger in France. Reassurances were received from Germany, but to Konrad Adenauer's suggestion of Franco-German union there was in many quarters an irritated and at best a cautious response, almost the least cautious being that of General Charles de Gaulle. Schuman in a speech to his party's congress on March 27, though reserved, did not refuse to look along the road suggested by the German chancellor but said that political difficulties should not be concealed behind economic negotiations. The entry of Germany into the Council of Europe would facilitate understanding with her. The Saar should not constitute an obstacle. The Saar would have to be considered at the German peace conference when all factors including the will of the inhabitants would be taken into account. On the same occasion Schuman spoke of an Atlantic community in which joint economic and political agencies should supplement the North Atlantic treaty's too strictly military character. Proposals for the creation of such bodies were put forward in April at the meeting of the foreign ministers of Great Britain, France and the U.S.

On May 9, just before going to London for three-power conversations, Schuman suddenly announced a French proposal to make a Franco-German war "forever" impossible and unthinkable, by submitting the two nations' steel and coal industries to a common authority, which would assure modernization, the provision of coal and steel under identical conditions on a common market, the development of exports and equalization of living conditions by levelling up. The proposal was open to all other nations who wished to join and it was obvious from the first that the proposal would not have been made without the strong hope that others would, especially Great Britain. There was great disappointment that Britain refused to accept the fundamental conception of a supra-national authority. But the French government insisted that if Europe was to be united (and this was a step on that path) there must be some surrender of authority. The French Socialists were very disturbed about the danger of a coal and steel pool without Socialist Britain. None the less a conference of France, Germany, Italy and the Benelux countries was opened in Paris on June 20 and negotiations were still proceeding with hope of success in December, although events greatly increasing the demand for steel made agreement with Germany more difficult. (*See* EUROPEAN COAL AND STEEL POOL.)

When the Korean war speeded up rearmament, French ideas on supplementing joint defence plans with joint financial and economic plans came to the fore again. On July 25 Pleven said that the necessary expansion of France's national defence would need Atlantic financing. France reiterated this need when in reply to the U.S. request to state its rearmament plans, it offered to produce 15 new divisions (20 in all) within three years.

The problem of how to include Germany in a western European defence scheme again brought France back to the European idea. Strongly opposed to the creation of a German national army the French government drew up a plan, announced to the Assembly on Oct. 24, by which the national military unit in Europe should be kept as small as possible (less than a division was the original conception), that a European general staff should be created under a European minister of defence, responsible to some assembly, perhaps that of Strasbourg, and administering a European defence budget. The spokesman of the Quai d'Orsay, interpreting this scheme, insisted that it meant that as far as its European territories were concerned France was prepared to surrender the identity of the French national army and merge its own general staff with that of other nations. It was not proposing to apply one measure to itself and another to Germany. Pleven argued that a German national army must be inspired by the ambition to reconquer eastern territories and have an influence on German policy. Its existence, a Socialist spokesman argued, must alarm the western Slavs. It would therefore endanger peace more than it strengthened defence.

The French proposals for a supra-national authority of various kinds stemmed naturally enough from its sense of relative weakness. Its proposals for a European army, though it was to prove popular at the European consultative assembly, isolated it at the November conference of North Atlantic national defence ministers at New York where it



President Vincent Auriol (centre, in formal dress) during his visit to the German U-boat pens at Lorient, Brittany, in April 1950. He presented the town with the Legion of Honour.

was represented by the rigid Moch. There began to be some anxiety that through its policy France was losing influence in the inner Atlantic councils, for which Moch was sharply criticized. The anxiety was all the greater because the desire was greater than in either Great Britain or the U.S. to see that any possibility of negotiation that arose should be exhaustively examined for any hope, so long as rearmament was not held up in consequence. This coloured France's attitude both towards the Soviet proposal for a four-power conference and towards the question of the 38th parallel in Korea. This attitude was due in part to the fact that its frontiers were still open to invasion and in part to the necessity of combatting Communist propaganda which affected a much larger percentage of the population than in either Great Britain or the U.S. For this reason the visit of Pleven and Schuman to London before Attlee set off to Washington was of great importance in French eyes since it provided evidence that on this occasion the French point of view was heard and indeed shared by one of the allies.

On Oct. 27 France prolonged military service from one year to 18 months and abolished all grounds of exemption save strictly medical ones. Moch said that the aim was to have armed forces of 900,000 men in 1953, 10 divisions in 1951, 15 in 1952, 20 in 1953. (D. R. Gi.)

Education. (1948-49) Elementary schools: state infant 3,653, pupils 404,200; private infant 217; pupils 13,300; state elementary 69,838, pupils 3,921,000; private elementary 10,932, pupils 961,700; state higher elementary, pupils 180,857; private higher elementary, pupils 60,359; total elementary 84,640, pupils 5,541,416. Secondary schools (*lycées*): boys 589, pupils 230,384; girls 390, pupils 189,619; total 947, pupils 420,003. Lower professional schools numbered more than 220 with over 80,000 pupils in 1948. Higher education: state universities 17, students (July 31, 1948) 128,754 including 38,734 in the law faculties. There were 10 other state institutions of higher education, 6 free (Catholic) universities and more than 80 state and private institutions of higher technical education.

Agriculture. Tables I, II and III show respectively the production of main crops, the amount of livestock and the production of certain foodstuffs.

TABLE I. AGRICULTURAL PRODUCTION ('000 metric tons)

	1934-38 av.	1946	1947	1948	1949	1950
Wheat	8,143	6,759	3,266	7,634	8,082	7,332
Rye	769	462	384	638	650	591
Barley	1,074	1,063	1,123	1,273	1,431	1,572
Oats	4,572	3,771	2,813	3,380	3,225	3,216
Maize	541	211	204	461	194	321
Potatoes	17,158	9,882	13,294	16,719	9,600	13,000

Generally, 1950 was a good year from the agricultural point of view. The wheat yield per ha. was larger than the average of 1934-38 (1,716 kg. against 1,540 kg.). The production of rice, a new crop introduced after World War II, was progressing steadily: the 1950 crop was estimated at 30,000 metric tons against 23,000 in 1949 and 11,000 in 1948. The country became again self-supporting as regards food, as it had been before World War II.

TABLE II. LIVESTOCK ('000 head)

	Nov. 1938	Nov. 1945	Oct. 1948	Oct. 1949
Cattle	15,622	14,272	15,437	15,432
Pigs	7,127	4,386	5,678	6,424
Sheep	9,872	6,700	7,408	7,510
Goats	1,416	1,146	1,236	1,282
Horses	2,692	2,258	2,407	2,418

TABLE III. FOODSTUFFS ('000 metric tons)

	1934-38 av.	1946	1947	1948	1949
Meat	1,660	1,250	1,380	1,500	1,749
Milk ('000 hl.)	141,000	106,000	103,000	112,000	125,000
Butter	202	152	143	160	183
Cheese	270	160	155	190	—
Sugar, raw value	971	688	664	960	881

France is the world's largest producer and consumer of wine. In 1938 its share in world wine production was about 40%. Immediately after World War II this share decreased to 25% but in 1949 reached 35%.

TABLE IV. WINE PRODUCTION, IMPORT AND EXPORT ('000 hl.)

	1938	1946	1947	1948	1949	1950
Produced	57,908	31,562	44,170	47,437	42,935	61,300
Imported*	16,326	9,282	6,612	9,894	10,302	10,000
Exported†	1,032	729	582	620	743	932

* Mainly from Algeria. † Mainly champagnes, clarets and Burgundy wines.

In the years 1934-38 the average consumption of wine per head of the population was about 160 litres; in 1945-48 it decreased to approximately 110 litres, and although it increased to about 120 litres in 1949 it was still only three-fourths of prewar consumption.

Industry. According to the 1946 census, there were 6,184,000 persons employed in industry as against 6,295,000 in 1936. The 1946 index number of employment in manufacturing was 98 (1937=100), the 1949 and 1950 yearly averages were 113. The index number of industrial production rose between 1946 and 1949 from 73 to 112 and in 1950 remained at this level. There was a marked slowing down of industrial activity. France cannot satisfy all its industrial needs. Rich in iron ore and bauxite, the country covers only three-quarters of its requirements in coal and is obliged to import almost all the crude oil, copper, zinc and tin it consumes; it is also indebted to foreign countries for 95% of lead, 90% of sulphur, 70% of pyrites, all its consumption of jute, 90% of cotton, 80% of wool and 75% of rubber. Only one-seventh

TABLE V. INDUSTRIAL PRODUCTION*
('000 metric tons unless otherwise stated)

	1938	1946	1949	1950†
Coal	47,600	47,200	51,204	50,300
Gas (million cu. m.)	1,692	2,448	2,448	2,350
Electricity (million kwh.)	20,800	23,000	28,560	30,000
Iron ore (33% metal content)	33,180	16,212	31,428	28,740
Pig iron	6,012	3,444	8,340	7,404
Steel ingots and castings	6,216	4,404	9,156	8,190
Cement	4,106	3,864	6,684	7,150
Motor vehicles: cars	182,400	30,120	187,680	236,600
Motor vehicles: commercial	39,360	62,520	96,600	88,000
Woven cotton fabrics	158·4	100·8	155	170
Wool yarn	117·6	92·4	122	122
Rayon filament yarn	27·9	30·9	46·4	41·9
Rayon staple fibre	5·6	17·3	28·0	34·5

* Excluding the Saar. † Estimate for year based on first nine months.

of the raw materials imported were supplied by France's overseas territories; for the rest, the country was obliged to have recourse to the dollar and sterling areas.

TABLE VI. IMPORTS OF RAW MATERIALS ('000 metric tons)

	1938	1946	1949	1950*
Coal†	18,684	8,640	15,948	10,180
Coke†	2,361	1,149	5,064	3,480
Crude oil	6,969	2,686	11,796	13,900
Pyrites	430	567	648	510
Sulphur	186	158	165	165
Copper	123	151	148	107
Lead	48	45	24	44
Zinc	36	52	50	31
Tin	9·7	8·4	4·8	5·3
Cotton	278	203	259	292
Wool	117	126	113	111
Jute	82	78	55	73
Natural rubber	65	58	91	144
Hides	153	105	88	105
Paper pulp	396	231	412	480

* Estimate for year based on first 10 months. † Including Saar deliveries.

For all raw materials imported in 1950 the rise in prices was estimated at 30% on the average. This caused, therefore, a supplementary expenditure of some $400 million, an amount comparable to the entire E.R.P. aid for 1950 ($460 million).

Foreign Trade. During the year the continuous adverse balance of foreign trade was almost eliminated. This development was not, however, entirely satisfactory; imports decreased in weight although increasing in value because of the rising prices in world markets. Exports increased in value by a quarter, but the main reason for the increase was the U.S. stockpiling of raw materials and semi-manufactured goods. In Table VII imports and exports are given in actual values (million current francs) and, in brackets, in the index numbers of quantum, that is, after allowing for changes in prices which had occurred since 1938, the base year.

TABLE VII. EXTERNAL TRADE

	1938	1946	1949*	1950*
Imports	46,068 (100)	234,042 (115)	921,794 (104)	1,072,850 (105)
Exports	30,588 (100)	101,406 (50)	782,022 (132)	1,072,620 (155)
Deficit	15,480	132,636	139,772	230

* Including the Saar.

Main sources of imports (1950): French Union (26·2%); U.S. (12·3%); Western Germany (6·5%); Belgium-Lux. (4·6%); Australia (3·9%); U.K. (3·7%). Main destinations of exports: French Union (36·2%); U.K. (9·2%); Western Germany (8%); Belgium-Lux. (6·5%); Switzerland (5%); U.S. (4·1%).

Transport and Communications. Railways (1949): 41,130 km. including 3,630 km. electrified. Railway traffic (monthly averages, 1949; 1938 in brackets): passenger-km. 2,456 (1,837) million; ton-km. 3,420 (2,210) million; metric tons ('000) transported 13,387 (11,024). Roads (1949): 715,170 km. including 80,210 km. of first-class national roads. Licensed motor vehicles (Jan. 1950): 2,295,000 including 572,800 commercial. Registered bicycles (1949): 11,893,380. Navigable inland waterways (1948), 8,488 km.; cargo (monthly average, '000 metric tons, 1949): loaded 2,794, unloaded 2,852. Shipping (Nov. 1950; in brackets Sept. 1939): merchant vessels 692 (670), gross tonnage 2,905,703 (2,733,633). The actual total, however, included 75 emergency "Liberty" ships and 188 ships more than 20 years old; urgent replacements were estimated at 1 million tons. Ships entered (monthly average, '000 net registered tons, 1949; 1938 in brackets): 2,985 (4,328); cargo in external trade (monthly average, '000 metric tons, 1949; 1938 in brackets): loaded 1,234 (1,050), unloaded 2,969 (2,989). Air transport (monthly average, 1949; 1938 in brackets): passenger-km. 82·1 (6·1) million, ton-km. 3·3 (0·2) million. Telephones (Jan. 1949): 2,232,536 including 1,336,790 (59·9%) with automatic dial. Wireless receiving set licences (1947): 5,728,000; television receiving sets (Dec. 1950 est.): 25,000.

Finance and Banking. Table VIII gives the postwar budget figures with the last prewar budget as a measure of comparison.

TABLE VIII. REVENUE AND EXPENDITURE ('000 million current francs)

	1938*	1946*	1948*	1949†	1950†	1951†
Revenue	53·8	815·6	1,021·0	1,440·0	2,218·0	1,975·0
Expenditure	52·2‡	1,286·9	1,596·0	1,870·0	2,217·5	2,615·0
Deficit or surplus	+1·6	−471·3	−575·0	−430·0	+0·5	−640·0

* Actual. † Estimates. ‡ Extraordinary expenditure for defence not included.

National income ('000 million francs, 1949; 1938 in brackets): 6,929 (369). Public debt ('000 million francs): internal (Sept. 1, 1939) 432·6, (Sept. 30, 1949) 2,662·9; external (Sept. 30, 1949) 1,181·9. Currency circulation ('000 million francs, end of the year): (1938) 112, (1945) 577, (1950) 1,511·7. This more than thirteen-fold increase of the note circulation in 12 years was a natural consequence of the depreciation of currency. The value of circulation expressed in dollars was $3,170 million in 1938 and $4,320 million in 1950. Between Dec. 1932 and Dec. 1950 the nominal value of the gold reserves increased only from Fr. 83,128 million to Fr. 182,700 million, the successive devaluations of the franc and re-estimation of the value of the gold reserve in new currencies concealing the true picture. The last revaluation of gold reserves took place on Aug. 2, 1950. In weight, however, the gold reserve decreased from 4,900 metric tons in Dec. 1932 to 464·6 metric tons on Aug. 31, 1949. On Sept. 20, 1949, the franc was devalued for the tenth time since June 25, 1928, when the franc Poincaré replaced the franc Napoleon. Official exchange rates: £1 = Fr. 980; $1 = Fr. 350.

See G. Wright, *The Re-shaping of French Democracy* (London, 1950). (K. SM.)

FRANCO Y BAHAMONDE, FRANCISCO, Spanish army officer and statesman (b. El Ferrol, Galicia, Dec. 4, 1892), graduated from the military academy of Toledo in 1910. On the outbreak of civil war in July 1936 he became leader of the rebels. After a bitter three-year struggle, he emerged as the *caudillo* and *generalisimo* of Spain. During World War II, although his sympathies were pro-German and anti-Soviet, he remained neutral. On June 8, 1947, the Cortes passed unanimously the Succession act making Spain a nominal kingdom, confirming Franco in office as chief of the state for life, according him the right to nominate his successor and stipulating that the candidate to the Spanish crown must be at least 30 years old. On Aug. 25, 1948, Franco met Don Juan de Borbón (b. June 20, 1913), the claimant to the Spanish throne, in his yacht off Arcachon. It was unofficially reported that Don Juan was asked by Franco to renounce his own claim and to consent to his son, Don Juan Carlos, the Prince of Asturias (b. 1931), being the next king of Spain. Don Juan, however, refused to "abdicate." On Oct. 22, 1949, Franco arrived aboard the cruiser "Miguel de Cervantes" at Lisbon for a state visit, which reciprocated President A. O. de Fragoso Carmona's visit to Spain in 1929 and was the *caudillo's* first journey abroad since 1941. Between Sept. 25 and 27, 1950, Franco received Antonio de Oliveira Salazar, the Portuguese prime minister, near Corunna and also spent some time with him in Portugal. On Oct. 22 he arrived in the cruiser "Canarias" at Teneriffe. After visiting all seven of the Canary Islands and the colonies Ifni and Rio de Oro, he returned to Cadiz after 10 days' absence.

FRASER OF NORTH CAPE, BRUCE AUSTIN FRASER, 1st Baron, of Molesey, Surrey, British admiral of the fleet (b. London, Feb. 5, 1888), was educated at Bradfield and entered the Royal Navy in 1902. He served in World War I and, in 1920-32, was flag captain, East Indies. He was director of naval ordnance, 1933-35, returning to sea in 1936 to command the carrier "Glorious." He became chief of staff, Mediterranean fleet, 1938, and as third sea lord and controller of the navy, 1939-42, was responsible for naval expansion in the early part of World War II. In 1942 he was appointed second in command, Home fleet, and was commander in chief, 1943-44; in Dec. 1943 he led the operation which ended in the sinking of the German battleship "Scharnhorst." In 1944, Fraser, promoted full admiral, became c. in c. Eastern (later Pacific) fleet. His barony was conferred in 1946 and, in 1947-48, he commanded at Portsmouth. In 1948 he became first sea lord and chief of naval staff. In April 1950, Lord Fraser paid a short visit to the U.S. for discussion with American defence chiefs and to Canada. In May he cruised in northern waters in the destroyer "Nepal," calling for defence talks at Oslo, where King Haakon was his guest aboard "Nepal," and Copenhagen, where he entertained the King and Queen of Denmark. He was later received at Amsterdam by Queen Juliana, called at Antwerp and travelled through to Brussels for discussions with the Belgian minister of defence. Commenting on his tour, Lord Fraser said that in order to reach full understanding with a colleague from another country it was not

sufficient to meet at conferences in London or other centres; it was necessary to visit them in their own countries as well. In September, the first sea lord again went to Belgium, in the frigate " Redpole " to visit the Belgian navy at Ostend.

FREEMASONRY. At the grand festival of the United Grand Lodge of Ancient Free and Accepted Masons of England, on April 26, 1950, the Duke of Devonshire was proclaimed on his re-election as grand master; he re-appointed the Earl of Scarborough deputy grand master and Brigadier General W. H. V. Darell assistant grand master. The duke died on Nov. 26.

As it had become known that the Grand Lodge of Uruguay had departed from the basic principles of freemasonry in so much as it was now possible for atheists to be admitted into the Uruguayan lodges, the Grand Lodge of England, at its quarterly communication in September, withdrew recognition from it.

A notable mission was carried out in the summer by the grand secretary, Sydney A. White, who travelled to Western Australia to attend the freemasons' golden jubilee there and subsequently visited lodges in other Australian jurisdictions (Victoria, New South Wales, Queensland and South Australia). His tour comprised a round journey of 34,000 mi.

Warrants for more than 120 new lodges were granted; this is believed to be a record number for a year. There were thus in all more than 7,000 lodges on the register.

In February President Truman unveiled at Arlington, Virginia, a 17 ft.-high statue of George Washington dressed in regalia as the first master of the Alexandria-Washington Lodge. (E. BA.)

FRENCH EQUATORIAL AFRICA. Federation of four colonies, described from 1946 as overseas territories of the French Union, situated in central Africa and bounded W. by the Atlantic ocean, Nigeria and French West Africa, N. by Libya, E. by the Anglo-Egyptian Sudan and S.E. by the Belgian Congo. The southeastern part of the former German colony of Kamerun (Cameroun), under French trusteeship, is administered with the A.E.F. (Afrique Equatoriale Française). Areas and populations are:

	Area (sq.mi.)	Population (1936 census)	Population (1946 census)
Gabon	103,089	409,700	422,904
Middle Congo	132,046	746,800	631,151
Ubanghi-Shari	238,224	833,900	1,065,390
Chad	495,752	1,432,600	2,011,494
	969,111	3,423,000	4,130,939
Cameroun	170,231	2,389,500	2,819,800

In 1950 the total population was estimated at 4,346,000 including 17,440 Europeans (5,825 French); the population of the Cameroun was estimated at 3,006,000 including 7,536 French. The Natives are mainly Bantu, but the northern savannah districts are peopled by semi-Hamitic semi-Negroid pastoralists. Europeans (1948), 13,300 (including 9,900 French) in the four territories of the A.E.F. and 6,500 in the Cameroun. Religion: the Natives of the A.E.F. remain animist; while the Chad territory has been substantially penetrated by Islam, which has claimed 46% of the population, the Gabon and the Middle Congo, where the number of Christians is high (about 280,000), are comparatively free, and in Ubanghi-Shari Moslems represent no more than 2·5%. Chief towns: Brazzaville, capital of the A.E.F. (pop., mid-1949 est., 83,579, including 4,353 Europeans); Bangui (pop., 1948 est., 41,000); Fort Lamy (18,300); Libreville (12,600); Yaoundé, capital of the Cameroun (pop., 1946 est., 50,000). High commissioner in the A.E.F., Governor General Bernard Cornut-Gentile. Governors: Gabon, Pierre Pellieu; Middle Congo, Hippolyte Le Layec; Ubanghi-Shari, Ignace Colombani; Chad, Charles Hanin. High commissioner in the Cameroun, Jean Soucadaux.

History. Thanks to capital investment, French Equatorial Africa, after long neglect, had begun by 1950 to develop its economy. There was a distinct increase in the exploitation of timber in the Gabon and of palm oil and palm kernels. As nine-tenths of the stock-farming was concentrated in the Chad territory, it had not yet been possible to provide Ubanghi-Shari and the Gabon with normal supplies of meat. The A.E.F. having become the foremost mining country of French Africa, 400 engineers and 20,000 Native workers were employed in copper and oil prospecting in the Niari valley and the Gabon respectively. Poor technical equipment was responsible for a 50% decrease in gold production between 1941 and 1949; on the other hand, the introduction of fully mechanized methods doubled the extraction of rough diamonds between 1943 and 1949. In the first nine months of 1950 exports of coffee and cocoa exceeded the figures for the whole of 1949; the export of cotton increased by 15% and that of sisal was more than doubled. Goods and passenger traffic at Brazzaville's Maya-Maya airport during the first quarter of the year equalled the volume of similar traffic of the preceding year. Notable strides were taken in the modernizing of Brazzaville and Pointe-Noire, but there were complaints that Fort-Lamy was being denied such benefits. Application of E.R.P. aid seemed likely to solve the fundamental problem of road construction. Special ceremonies in July and August marked the centenary of the French arrival in the Gabon.

An increasing part in the affairs of the trust territory of Cameroun was taken by France during 1950, including the provision of 72% in weight of goods (55% in 1949) and 80% in value (75% in 1949) and the supply of 45% of sea transport (30% in 1949). Port construction at Garoua counted on a goods traffic of 37,000 metric tons by 1951 (loadings and unloadings in 1949 amounted to 10,000 tons). Still more striking was the rise of the port of Duala where merchandise loaded and unloaded in 1950 amounted to some 450,000 metric tons. Since transit of goods to the Ubanghi-Shari territory was steadily increasing, and development of the road system would expand also traffic to the Chad, it was estimated that the port would eventually unload and load 1·2 million metric tons. Trial planting of cinchona by the experimental station produced a ton of quinine. New sawmills raised the annual capacity of sawn timber to more than 100,000 cu.m. Progress in electric power-station construction at Edea foreshadowed a supply sufficient for the Duala-Edea region for important industrial development. The inquiry commission of the U.N. Trusteeship council was, on the whole, favourably impressed by conditions in the territory.

French Equatorial Africa. *Agriculture.* Main crops (1949, '000 metric tons): millet 550; cassava 390; bananas 347; palm oil 4·5; palm kernels 6·4; cotton 23·3. Livestock (1949, '000 head): cattle 4,000; sheep 3,500; goats 2,500; pigs 5; horses 10. Timber (Gabon) 579,000 cu.m.

Mineral Production. (1949) Gold 1,800 kg.; diamonds 122,928 carats.

Foreign Trade. (1949, million francs C.F.A.) imports 11,309·5; exports 6,313.

Transport and Communications. Railways (1946): 512 km. Roads (1949): 38,087 km. Motor vehicles licensed (1948): cars 640, commercial 2,600. Shipping (1949, '000 metric tons, cargo unloaded; loaded in brackets): Pointe-Noire 193 (71); Brazzaville 54·7 (53); Port-Gentil 41·1 (96·3); Libreville 27·2 (99). Passengers (1949, all ports): arrivals 8,179; departures 7,025. Air transport (1949): aircraft landed 572; passengers flown, arrivals 6,020, departures 5,885; freight carried (metric tons), unloaded 743·7, loaded 517.

Finance. Budget (1949 actual): balanced at Fr.C.F.A. 3,928·1 million; (1951 est.) balanced at Fr.C.F.A. 7,710·3 million.

Cameroun. *Agriculture.* Main crops (1949, '000 metric tons): cassava 829; millet 412; maize 109·8; yams 70; bananas 383·5; rice 8·4; groundnuts 69·6; palm oil 37·2; palm kernels 31·9; sugar cane 56·9;

cacao 45·7; coffee 7·4; rubber 2·4. Livestock (1949, '000 head): cattle 1,000; sheep 400; goats 600; pigs 100.

Mineral Production. (1949) Tin 104 metric tons; gold 279 kg.

Foreign Trade. (1949, million francs C.F.A.) imports 8,387; exports 6,661.

Transport and Communications. Railways (1949): 505 km. Roads (1948): 10,606 km. Ships entered (1949) 450; cargo ('000 metric tons), unloaded 388, loaded 444·1. Air transport (1949): aircraft landed 557; passengers, arrivals 2,878, departures 4,010; cargo (metric tons), unloaded 50, loaded 52·9. Telephone subscribers (1949): 751.

Finance. Budget (million francs C.F.A.): (1950 est.) balanced at 3,125; (1951 est.) balanced at 4,682 excluding 2,700 for development and equipment. Monetary unit: franc C.F.A. (Colonies Françaises d'Afrique) = M.Fr. 2. (C. A. J.)

FRENCH GUIANA. Former colony on the N.E. coast of South America, the status of which was changed in 1946 to that of an overseas *département*. Area, including the territory of Inini (30,301 sq.mi.): 34,740 sq.mi. Pop. (1936 census): 23,828, excluding Inini; (1946 census) 28,506, including Inini (4,993). The population, concentrated in great majority on the coastal lowland, is mainly coloured (Negro or mixed); the inhabitants of Inini are aboriginal Indians; the Europeans are about 5%. Religion: mainly Roman Catholic. Capital and chief port, Cayenne (pop., 1948 est., 10,961). Prefect, Robert Vignon.

History. Postwar exploration, of which the results were published in 1949, disclosed that there was no great chain of Tumuc-Humac mountains south of the plateau, separating the basins of the Oyapock and of the Maroni from the Amazon basin, but only a small isolated group. It was also discovered that the black Boni of the Maroni, descended from slaves of mixed origin, were organized in tribes of clearly African type from which half-castes were excluded.

Great efforts directed since 1948 towards the equipment of the country had begun to show results in 1950, but the full effect of these changes was not expected to be felt before 1952 and succeeding years. The main improvements were in the field of electrification and water-supply; and the road system also was being modernized. On Aug. 18 a 75% *ad valorem* duty was imposed by the General Council of the territory on imported rum and tafia to protect the local rum industry against competition by Martinique products. From March contact by sea with the United States was made no longer by means of French shipping but by U.S. vessels plying from New York to Paramaribo and thence by Dutch ships to Cayenne. Some goods were delivered *via* Fort-de-France, Martinique. Nineteen refugees from camps of the International Refugees organization in Germany left on Dec. 15 to join 174 similar settlers established in 1949 at Saint-Jean-de-Maroni in the old penitentiary abandoned since the abolition of the convict prison. An outstanding undertaking was the planning of a French Institute of Tropical America for which funds were made available.

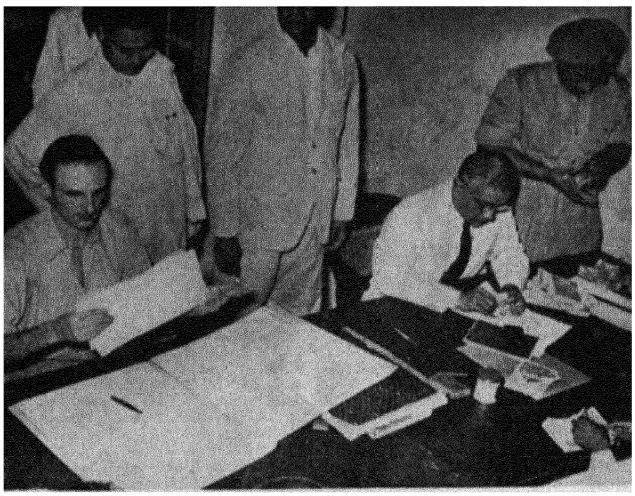
Agriculture. Main crops (1949, metric tons): sugar cane 17,500; cassava 12,000; sweet potatoes 3,200; maize 250; bananas 250. Livestock (1949): cattle 3,000.

Foreign Trade. (1949, M.Fr. million) import 1,031·3; export 219·3. Main exports: tulip-wood 2,300 kg.; gold 467·1 kg.; rum 254 hl.

Finance. Budget (1950, M.Fr. million): *département*, balanced at 433·6; territory of Inini, balanced at 87·3. Monetary unit: metropolitan franc. (C. A. J.)

FRENCH INDIA. Group of four settlements in India with a total area of 193 sq.mi. Pop. (1948 est.): 317,300. The Bengali-speaking Chandernagore (4 sq.mi.; pop. [1948], 44,800) was transferred to India on May 2, 1950. The four Tamil-speaking southern settlements are:

	Area (sq.mi.)	Population (1938 est.)	(1948 est.)
Pondicherry	112	181,000	222,600
Karikal	52	62,500	70,500
Mahé	23	13,400	18,300
Yanaon	6	5,400	5,900



Georges-Henri Tailleur, French administrator of Chandernagore (left), about to sign the agreement for the settlement's transfer to India on May 2, 1950. On right is B. K. Banerji, the new Indian administrator.

Chief town and seat of administration, Pondicherry (pop., 1948 est, 22,572). Commissioner, André Meynard.

History. Since the transfer of Chandernagore to India, which did not include it in Western Bengal but undertook to administer it directly (May 2), French settlements in India constituting an overseas territory included only four provinces. On Dec. 6 Jawaharlal Nehru reaffirmed that no foreign possessions were to remain in India. This viewpoint was accepted by the Indian deputy to the French National Assembly, Saravane Lambert, who proposed transfer pure and simple to India without recourse to a popular referendum. He found support among the members of the *ashram* (hermitage) founded at Pondicherry by Aurobindo Ghose (*see* OBITUARIES), high-caste Hindus and even the Roman Catholic intellectual élite. All claimed that the spread of France's cultural influence would continue unhampered. Taking into account the Chandernagore precedent, the French government took its stand on the 1946 constitution by which any cession of territory was to be subject to the consent of the population. Life was made difficult for the settlements by Indian customs requirements and limitation of supplies.

Foreign Trade. (1948) imports 3,214 metric tons valued at M.Fr. 147·1 million; exports 1,594 metric tons valued at M.Fr. 633·9 million.

Finance. Budget (1949 actual) balanced at Rs. 6,956,800. Monetary unit: rupee. Exchange rate (Dec. 1950): Rs. 1 = M.Fr. 73·55. (C. A. J.)

FRENCH LITERATURE. Following upon the period of "literary commitment" rooted in the experience of the war, the tendency to withdraw from political and social action, already noticeable among French writers in 1949, became more evident as 1950 advanced; and, except for those who had linked their fate indissolubly to that of Russian Marxism (e.g., Louis Aragon, Paul Eluard, Tristan Tzara, Roger Vailland), there appeared to be little serious literary reaction to the acceleration of events on the world stage.

The death of Emmanuel Mounier (*see* OBITUARIES) dealt a serious blow to liberal Catholic intellectuals and left them, despite the distinguished personality of Albert Béguin (who succeeded Mounier as director of *Esprit*) without a rallying force. In another camp, André Breton's genius for leadership seemed to lack both orientation and disciples: his activities, confined to a new, enlarged edition of *L'Humour noir* and a special number on surrealism published by the review *La Nef*, were more of an historic than of a creative nature. André Malraux's attention was concentrated on interpretation



On June 22, 1950, Jean-Louis Vaudoyer became a member of the Académie Française in succession to Edmond Jaloux. He is seen here delivering his speech in honour of his predecessor.

of the visual arts of past epochs. Finally, it was perhaps significant that Jean-Paul Sartre's chief contribution to the year's output was a long, almost metaphysical analysis of the work and personality of a rarely gifted fellow-writer, Jean Genêt, self-avowed thief and pervert, author of *Notre Dame des Fleurs*, *Journal du voleur*, etc. The reiterated " too late " of Sartre's preface to the Spaniard Juan Hermanos' *La Fin de l'Espoir*, a bitter summing-up of the tragedy of Republican Spain, was indicative of a general mood. Pessimism, nihilism, romanticism, occultism were all present in the French literature of the mid-20th century.

In the field of the novel, impartial judgment would demand the mention of some 15 titles, for there appeared to be few marked preferences on the part of the public, and this despite the wide publicity accompanying the Goncourt, Théophraste Renaudot and Femina prizes, awarded respectively to *Les Jeux sauvages* by Paul Colin, *Les Orgues de l'enfer* by Pierre Molaine and *Une Femme sans passé* by Serge Groussard. (*See* also LITERARY PRIZES.) Hervé Bazin's story of possessive maternity which, because it was turned down by the Académie Goncourt, was wittily advertised as " *hors Goncourt*," was quite as popular as the prize-winners; and for many the best novels of the year were André Dhôtel's strange, poetic *L'Homme de la scierie* and Marguerite Duras' *Barrage contre le Pacifique*, the latter set in Indo-China. *Bon pied, bon oeil*, by Roger Vailland, and Louis Aragon's fourth volume of *Les Communistes* constituted good documentary accounts of certain political milieux; and *L'Affaire Bernan*, by Joseph Kessel, continued his contemporary chronicle, *Le Tour du malheur*, begun a few years back. Marcel Jouhandeau's unabashed *L'Imposteur*, part of a cycle entitled *Chroniques maritales*, gave a witty if cynical picture of the author's own stormy domestic life.

Although no poetry was published that could be called sensational — unless this term could be applied to Raymond Queneau's brilliant *Petite cosmogonie portative* — there appeared two volumes by René Char, *Les Matinaux* and *Art bref suivi de Premières alluvions*, both of which continued the humanistic, slightly moralistic tradition that has come to be associated with the work of this poet. *Passages*, by Henri Michaux, and *Connaissance du soir*, by Joë Bousquet (whose death occurred in November) were other highlights of a rather uninspired year. Among the younger poets, *Poésie zéro* and *L'Ecole Sultan*, by Georges Schéhadé, revealed a genuinely original talent; and the books of two still younger men, *Le Théâtre de la Chrysalide* by Romain Weingarten (author, in 1948, of a much discussed play, *Akara*) and *Derriére son double* by Jean-Pierre Duprey (with a preface by André Breton), were well received. Finally, Jean Paulhan (awarded the 1950 City of Paris prize for the sum of his critical activities) devoted an entire number of his *Cahiers de la Pléiade* to a group tribute in honour of the poet St. John Perse (Alexis Léger).

From the point of view of literary creation, the theatrical year was unusually lean, and there was a general critical wail over the dearth of good new plays. The season was therefore given over for the greater part to revivals and translations, with emphasis on the producer's art rather than on the play itself. With only three exceptions — Marcel Aymé's *Clérambard*, Henry de Montherlant's *Malatesta* and the Kafka-like experiments of Arthur Adamov — none of the new plays, not even those of Jean Anouilh, Henry Bernstein, François Mauriac, Armand Salacrou and Albert Camus, obtained more than perfunctory critical notice.

The epoch was essentially one of militant philosophical renewal. Emile Bréhier's *Transformation de la philosophie française* and Jean Wahl's article on philosophy in the symposium entitled *Cinquante années de découvertes* furnished important summaries of the philosophical currents of the first half of the century: increasing discredit of the notion of philosophical " systems " and, parallel with an apparently triumphant subjectivity, a return to the concrete, with the perspective of a veritable offensive of rationalism. Louis Lavelle's two new works, *Traité de valeurs* and *Introduction à l'ontologie* attracted considerable comment, as did the late Simone Weil's *Connaissance du surnaturel*. Other works to be noted were *La Nostalgie de l'être* by Ferdinand Alquié, *Signification du rire* by Francis Jeanson and *Philosophie de la volonté* by Paul Ricoeur. Jean-Paul Sartre was said to be working on a monumental *Traité de la morale*. A symposium, *Etudes nietzschéennes*, commemorated the 50th anniversary of Friedrich Nietzsche's death.

Evidence of increasing attentiveness to the social sciences was furnished by the publication of such volumes as *Sociologie et anthropologie*, by the late Marcel Mauss, with an introduction by Claude Lévy-Strauss; *La Mémoire collective*, by the late Maurice Halbwachs; *Sociologie du communisme*, by Jules Monnerot, and *L'Utopie et les utopies*, by Raymond Ruyer. There was also a bewildering number of new works, by both French and foreign authors, treating of the many religious, aesthetic, political and economic problems of the day. Some of the more important titles were: (religion) *Emmaüs* by Paul Claudel, *Dialogue des Carmélites* by the late Georges Bernanos, *Eveils* by Jean Schlumberger, *La Religion des Cathares* by Hans Soderberg, and *L'Occultisme* by Robert Amadou; (aesthetics) *L'Artiste et sa conscience* by René Leibowitz, *Précis de décomposition* by E. M. Cioran, *Etudes sur le temps humain* by Gaston Poulet, *Bâtons, chiffres et lettres* by Raymond Queneau, *Les Fauves* by Georges Duthuit, *Saturne, essai sur Goya* by André Malraux, and *La Littérature à l'estomac* by Julien Gracq; (general) *La Renaissance orientale* by René Schwob, *Le Mystique du surhomme* by Michel Carrouges, *Portrait de l'aventurier, T. E. Lawrence, Malraux, von Salomon* by Roger Stéphane, *Genèse de la pensée moderne* by Marcel Jean and Arpad Mezei, and *Où va le peuple américain?* by Daniel Guérin.

Three important anthologies, *Lumière du Graal*, *Le Romantisme allemand* (new, revised edition) and *Aspects du génie d'Israël*, appeared in Marseilles.

The year saw the appearance of two lively new literary reviews, *Contemporains* and *Eléments;* the regrettable disappearance of two others, *Empédocle* and *Paru;* and the revival, after a year's silence, of the sharply analytical *Critique*.

(M. JOL.)

FRENCH SETTLEMENTS IN OCEANIA: *see* PACIFIC ISLANDS, FRENCH.

FRENCH UNION. With the establishment, by the constitution of 1946, of the French Union, in which are comprised both the mother country and the former empire, the old colonial terminology was abolished and for the colonies were substituted four categories of overseas regions. The older, completely assimilated colonies claimed recognition as French *départements* administered as in the mother country; the others became overseas territories (*territoires d'outre-mer*) which henceforward would elect representatives to parliament and would have their own local assemblies possessed of wide powers; the trust territories, to be known in future as *territoires associés*, were similar in structure to the overseas territories and had the same electoral privileges; lastly, there were the former protectorates, now styled *états associés*, which could belong to the union only by an act of voluntary accession. Total area of the overseas territories of the French Union: approximately 4,593,085 sq.mi.; total population (1948 est.): 78·7 million. Certain essential information on the component parts of the French Union is given in the table. (*See* also separate articles).

History. The setting up of the central machinery of the French Union was a protracted operation. Overwhelmed with work, the National Assembly had no time to go into overseas problems which the Assembly of the French Union, endowed with only consultative powers, had not the authority to settle. The High Council of the French Union, which must assist the government with recommendations for the general administration of the Union, although instituted by the act of April 24, 1949, was not yet ready to function, and the formation of a Ministry of Associated States (May 23, 1950), which for the time being were the three states of former Indo-China, added to the departmental confusion. Thenceforward there were four ministries concerned with overseas

Country	*Area (sq.mi.)*	*Population* ('000)*	*Capital*	*Status*	*Rulers and Governors*
AFRICA					
ALGERIA	851,078	8,676	Algiers	Group of three départements	Governor General, Marcel-Edmond Naegelen
MOROCCO	153,870	9,200†	Rabat	Protectorate	Sultan, Mohammed ben Yussef III Resident General, Gen. Alphonse Juin
TUNISIA	48,332	3,231‡	Tunis	Protectorate	Bey, Mohammed el-Amin Resident General, Louis Périllier
FRENCH WEST AFRICA	1,805,287	16,375	Dakar	Group of territories	High Commissioner, Governor General Paul Béchard
MAURITANIA	364,092	524	Saint-Louis	Overseas territory	Governor, Marie Rogué
SENEGAL	81,081	1,994	Saint-Louis	Overseas territory	Governor, Camille Bailly
SUDAN	461,389	3,137	Bamako	Overseas territory	Governor, Edmond Louveau
UPPER VOLTA	121,892	3,044	Ouagadougou	Overseas territory	Governor, Albert Mouragues
IVORY COAST	493,822	2,031	Abidjan	Overseas territory	Governor, Laurent Pechoux
FRENCH GUINEA	129,807	2,130	Conakry	Overseas territory	Governor, Paul Siriex
NIGER	108,455	2,041	Niamey	Overseas territory	Governor, Jean Toby
DAHOMEY	44,749	1,474	Porto Novo	Overseas territory	Governor, Claude Valluy
TOGOLAND	20,463	953	Lomé	Trust territory	Commissioner, Jean Cédile
CAMEROUN	169,436	2,902	Yaoundé	Trust territory	High Commissioner, Jean Soucadaux
FRENCH EQUATORIAL AFRICA	969,111	4,131‡	Brazzaville	Group of territories	High Commissioner, Governor General, Bernard Cornut-Gentile
GABON	103,089	423	Libreville	Overseas territory	Governor, Pierre Pellieu
MIDDLE CONGO	132,046	631	Brazzaville	Overseas territory	Governor, Hippolyte Le Layec
UBANGUI SHARI	238,224	1,065	Bangui	Overseas territory	Governor, Ignace Colombani
CHAD	495,752	2,011	Fort Lamy	Overseas territory	Governor, Charles Hanin
FRENCH SOMALILAND	8,376	56	Jibuti	Overseas territory	Governor, Numa Sadoul
MADAGASCAR AND DEPENDENCIES	228,589	4,160	Antananarivo	Overseas territory	High Commissioner, Governor General, Robert Bargues
COMORO ARCHIPELAGO	849	142	Dzaoudzi (Mayotte)	Dependency	Ruler, Prince Said Hussein Administrator, Pierre Coudert
RÉUNION	970	242‡	Saint-Denis	Overseas département	Prefect, Roland Béchoff
AMERICA					
SAINT-PIERRE AND MIQUELON	93	4‡	Saint-Pierre	Overseas territory	Administrator, Alain Alaniou
FRENCH GUIANA	34,740	27	Cayenne	Overseas département	Prefect, Robert Vignon
GUADELOUPE	686	278‡	Basse-Terre	Overseas département	Prefect, Maurice Philipson
MARTINIQUE	427	262‡	Fort-de-France	Overseas département	Prefect, Christian Laigret
ASIA					
FRENCH INDIA	193	317	Pondicherry	Overseas territory	Commissioner, André Meynard
STATE OF VIETNAM	126,608	22,663	Saigon	Associated State	Ruler, Bao Dai High Commissioner and C.-in-C., General Jean de Lattre de Tassigny
CAMBODIA	69,866	3,748	Pnom-Penh	Associated State	King, Norodom Sihanouk Commissioner, Jean de Raymond
LAOS	89,320	1,169	Vientiane	Associated State	King, Sisavang Vong Commissioner, Miguel de Pereira
OCEANIA					
NEW CALEDONIA AND DEPENDENCIES	7,654	61‡	Nouméa	Overseas territory	General Commissioner for the Pacific Islands, Pierre Cournarie
NEW HEBRIDES	5,700	47	Vila	Franco-British Condominium	High Commissioner, Pierre Anthonioz
FRENCH PACIFIC ISLANDS	1,545	56‡	Papeete	Overseas territory	Governor, René Petitbon

* 1948 est. if not otherwise stated. † 1949 est. ‡ 1946 census.

affairs, but no co-ordinating body existed. In consequence, conservative-minded officialdom, both local and central, increased its influence, and the reformist policy pursued in Paris lacked both boldness and efficiency, as had already been demonstrated in Indo-China and was now becoming apparent in Morocco and Tunisia. The supporters of authoritarian centralist traditions strove to regain the advantage.

The year 1950 witnessed a deterioration of the situation in Indo-China, and the country was becoming a determining factor in international policy in Asia. Elsewhere conditions were quiet, though nationalism was not disarmed. In north Africa the Tunisian Neo-Destour party negotiated with skill but small success. Algerian and Moroccan Nationalists, who blamed it for collaborating with the government, contented themselves with systematic opposition in print and speech. In Madagascar repression of the chiefs had put an end to all but token demonstrations.

In the four overseas *départements* administrative chaos consequent upon the transfer of responsibilities from the Ministry of France Overseas to that of the Interior gave rise to many complaints. The most serious contest, however, was staged in Negro Africa. A Roman Catholic Negro doctor, Félix Houphouet-Boigny, a substantial landed proprietor and deputy for the Ivory Coast, possibly the most outstanding political figure of Negro Africa, had created in 1946 the Rassemblement Démocratique Africain (R.D.A.) whose simple aim was to unite the Negro masses and their deputies in a single powerful movement for political democracy in Africa. This party, which achieved considerable success, was penetrated and eventually directed by Communists or Communist sympathizers, chiefly through Emmanuel d'Arboussier, the son of a colonial governor and a Peul woman, himself a former colonial administrator and a remarkably intelligent and cultivated man, who won the confidence of the Kremlin. But after ugly scenes of bloodshed on the Ivory Coast in Jan. 1950, the Communist influence lost ground and divergent views appeared to lead to a rupture. Efforts were made to bring about a re-grouping of the elected Africans, while among their followers there was a certain amount of confusion. It was impossible to foretell the outcome of a crisis which was bound to affect the future behaviour of Negro Africa.

On the Investment Fund for the Economic and Social Development of the Overseas Territories (F.I.D.E.S., or Fonds d'Investissement pour le Développement Economique et Social des Territoires d'Outre-Mer), set up in 1946, and on the corresponding reserve for the overseas *départements* (F.I.D.O.M.) was based all economic planning for the French Union. This capital was provided out of the French budget and territorial contributions voted by the local assemblies. In accordance with this a committee presided over by René Pleven had drawn up in 1946-47 a comprehensive plan for the development of the overseas territories; in 1949 its procedure was modified. By Sept. 30, 1950, loans and grants extended by the state to the overseas territories and *départements* amounted to Fr. 86,723·3 million. But the limitations imposed on allocations for 1951 by the international situation and the heavy burden of rearmament meant that it would not be possible to continue the work in progress, and the economic expansion of the French Union was in danger of being seriously retarded. (C. A. J.)

FRENCH WEST AFRICA. Group of eight colonies, described from 1946 as overseas territories of the French Union, situated in western Africa and bounded W. and S. by the Atlantic ocean, N. by the Spanish Sahara, the Southern territories of Algeria and the Fezzan, and E. by Chad and Nigeria. The group is administered by a high commissioner assisted by a council of government composed of civil and military leaders and a Grand Council consisting of metropolitan members and Africans elected by the territorial assemblies in the proportion of five per territory. The eastern part of the former German colony of Togo, under French trusteeship, is administered with the A.O.F. (Afrique Occidentale Française). Areas and populations are:

	(Area) (sq.mi.)	Population (1936 census)	(1948 est.)
Mauritania	364,092	383,000	524,000
Senegal	81,081	1,791,000	1,994,000
Sudan	461,389	3,569,000	3,137,000
Upper Volta*	121,892	—	3,044,000
Niger	493,822	1,747,000	2,041,000
Ivory Coast	129,807	3,850,000	2,031,000
French Guinea	108,455	2,011,000	2,130,000
Dahomey	44,749	1,351,000	1,474,000
	1,805,287	14,702,000	16,375,000
Togoland	20,463	781,000	953,000

* Territory of Upper Volta was formed on Jan. 4, 1947, from parts of Sudan, Ivory Coast and Niger.

Population: mainly Negro, but in the savannah lands there is much Arab and Berber admixture; European (1948), 51,760 (including about 40,000 French) in the A.O.F., in Togoland 841. Religion: Islam makes headway leaving, however, undisturbed the fundamental animism; animists were estimated at 53·4%, Moslems 44·2% and Christians 2·4%. Chief towns (pop., 1948 est.): Dakar, capital of the A.O.F. (185,000); Saint-Louis (62,900); Bamako (70,492); Conakry (38,000); Abidjan (36,000); Porto Novo (31,000): Lomé, capital of Togoland (30,100). High Commissioner in the A.O.F., Governor General Paul Béchard. Governors: Mauritania, Marie Rogué; Senegal, Camille Bailly; Sudan Edmond Louveau, Upper Volta, Albert Mouragues; Niger, Jean Toby; Ivory Coast, Laurent Pechoux; French Guinea, Paul Siriex; Dahomey, Claude Valluy. Commissioner in Togoland, Jean Cédile.

History. Production in this agricultural country tended to be specialized in areas, groundnuts, for instance, being the main concern of Senegal, palm oil of Dahomey, timber and its derivatives of the Ivory Coast, stock-farming of the Sudan, in the Niger valley and Mauritania, and karité (butter tree) of the Upper Volta. Work, however, largely centred on the Sudanese rice-fields in the Niger valley and the Senegalese fields near Saint-Louis. French West Africa, which consumed annually 15 to 20 metric tons of quinine, had planted in postwar years 140 ha. of cinchona and at the end of 1950 had 50 tons of bark ready for processing. At Dahomey and on the Ivory Coast two oilworks were established for the extraction of palm oil and also on the Ivory Coast an experimental factory for paper-pulp was set up. The Mining bureau, which laid out M.Fr. 600 million for prospecting in 1950-51, started large workings of iron ore and graphite in French Guinea, of copper ore in Mauritania and the Upper Volta and of phosphate rock in Senegal. In the realm of trade, considerable progress was recorded in port extensions at Dakar, Conakry and especially Abidjan where in July a channel 10 m. deep and 300 m. wide was cut across the offshore bar separating the lagoon from the ocean. Dakar was expected to accentuate in the future its role of transit station at the Europe-Africa-America crossroads, while Abidjan would become the natural outlet for coffee, cocoa and bananas

Ugly incidents on the Ivory Coast were provoked by the Rassemblement Démocratique Africain (R.D.A.), which passed under Communist control. A demonstration at Dimbokro on Jan. 30 ended with 12 dead and 22 wounded among the Natives and 22 wounded among the forces of law and order. Emergency measures taken by the government and the Native leaders' fear of excesses brought about the disruption of the R.D.A., an outcome of possibly far-reaching political consequence.

The problem of unifying the Ewés distributed between the two Togolands was examined by the Trusteeship council, which in its session of June-July decided to form a Franco-British Consultative commission. The commission would formulate plans for carrying out the aims of the two territories. In October delegates of the French government presented to the Trusteeship council their replies to the two petitions of Alexandre de Souza, chairman of the Council of Notables of Lomé and founder of the Comité de l'Unité Congolaise, who stood for the union of the two Togolands and against the electoral procedure and "arbitrary arrests" on French territory. Only supporters of French trusteeship were appointed to the Consultative commission as a result of the elections in French Togoland (Oct.-Nov.) by indirect suffrage. Discussion at the first session of the Consultative commission held at Lomé (Nov. 8-10) under the joint chairmanship of Sir Charles Arden-Clarke, governor of the Gold Coast, and Yves Digo, governor of Togoland, ended in the institution of a permanent commission charged with presenting a report on the points at issue. A direct air service between Paris and Lomé *via* Algiers and Niamey was inaugurated on May 3.

French West Africa. *Agriculture.* Main crops (1949, '000 metric tons): yams 1,459; groundnuts 729; cassava 924; rice 505; maize 290; palm kernels 60·9; palm oil 12·1; bananas 480·8; coffee 52; cocoa 52; cotton 23·8. Livestock (1949, '000 head): cattle 6,000; sheep 8,200; goats 6,200; pigs 260; horses (1948) 186·5; asses (1948) 561·7; camels (1948) 284.

Mineral Production. (1949, metric tons) phosphate alumina 5,675; ilmenite and zircons (1949, six months) 13,179; mineral oil (Senegal) 70,534; cement 43,918; diamonds 94,996 carats; gold 90·1 kg.

Foreign Trade. (1949, million C.F.A. francs) imports 34,479·7; exports 27,400·7.

Transport and Communications. Railways (1949): 3,918 km. Roads (1948): 75,799 km. Ships entered (1949): Dakar 2,234; Conakry 367; Port Bouet 152; Grand-Bassam 194; Cotonou 194. Cargo (all ports, '000 metric tons, 1949; 1950, six months, in brackets): unloaded 1,726 (1,077); loaded 1,433 (951). Passengers (all ports, 1949): arrivals 41,146; departures 43,980. Air transport (1949, aircraft landed): transcontinental traffic, French lines 501, foreign lines 2,467; intercolonial traffic 441. Passengers (total): arrivals 20,344; departures 20,383; transit 44,005. Freight carried (total): 5,365 metric tons. Telephone subscribers (1948): 5,665.

Finance. Budget (1951 est.) balanced at Fr.C.F.A. 27,884 million.

Togoland. *Agriculture.* Main crops (1949, '000 metric tons): cassava 170; yams 200; millet 90; maize 53; groundnuts 16; rice 5·2; palm kernels 4·4; palm oil 2·5; coffee 2; cocoa 2·5; cotton 1·3. Livestock (1949, '000 head): cattle 50; sheep 100; goats 100; pigs 10.

Foreign Trade. (1949, Francs C.F.A. million) imports 1,454·4; exports 844·7.

Transport and Communications. Railways (1948): 449 km. Roads (1948): 3,275 km. Ships entered (1949) 194. Cargo (metric tons): unloaded 40,600; loaded 48,100.

Finance. Budget (1949 actual) balanced at Fr.C.F.A. 555·5 million. Franc C.F.A. (Colonies Françaises d'Afrique) = metropolitan Fr. 2.

(C. A. J.)

FRIENDS, THE RELIGIOUS SOCIETY OF.

In London Yearly Meeting the membership in 1950 was 21,929 (an increase of 18 from 1949). This consisted of Quakers in Great Britain and 1,103 in Australia and New Zealand. Ireland Yearly Meeting had 1,964 members (an increase of 4). The biggest group in Europe was that in Germany with 488 members. On the continent "friends of the Friends" considerably outnumbered full members. The British Friends' 282nd annual gathering issued "a message of Good Will to All Men Everywhere" which was widely circulated in English, French, German and Russian. An outcome of joint activities of the Friends Peace committee and the Friends Industrial and Social Order council was the setting up of the society's East-West committee which worked in close co-operation with a similar U.S. Quaker group. Close personal touch was maintained with political and other leaders before and during the Korean war.

The society issued a statement re-affirming its belief that conscription was "an evil thing" and that its extension was "a form of rearmament which most invades the individual conscience and moulds a war mentality."

Relief work in Europe contracted but much clothing was sent for refugees in Germany, Austria and Greece. The Friends International centre in Geneva took over new premises and extended its work. The neighbourhood centres in Germany and the domestic science school in Thessaloniki continued. Quaker missionaries carried on in China, but the Friends Service unit closed down. In India and Pakistan the Friends Service unit was active among Hindu and Moslem minorities. In Pakistan a new Quaker centre was opened at Dacca. Other work in India, Madagascar and the Lebanon continued.

The outstanding Quaker loss was the death on March 4 at the age of 80 of Carl Heath, former secretary of the Friends Service council, a widely known worker for peace and for reconciliation between Britain and India.

Wartime damage to Friends house, Quaker headquarters in London, was repaired at a cost of £20,000. (H. W. Pe.)

United States. In 1950 of the total of about 179,000 members of the Society of Friends, 119,000 were in North America. In April 1950 Clarence Pickett, executive secretary of the American Friends Service committee for more than 20 years, retired to become honorary secretary. Lewis Hoskins, director of personnel for the committee, succeeded him as executive secretary.

After more than a year's preliminary work final arrangements were made for the beginning of a self-help slum clearance and housing project in Philadelphia, sponsored by the American section of the American Friends Service committee with the co-operation of the City Planning commission and the Federal Housing administration. A city block was to be re-developed with the use as far as possible of the labour of the residents.

The biennial general conference of six American Yearly Meetings was held in June at Cape May, New Jersey, with an attendance of 1,900. In October more than 1,000 members of the 11 Yearly Meetings comprising the Five Years' Meeting gathered at Richmond, Indiana. A conference representative of American Quakerism met at Richmond, Indiana, from Oct. 26 to 28, and drew up a statement on peace which it referred to the whole society for study and action. The conference reaffirmed a statement of a similar body published in 1948, which emphasized the society's historic opposition to war and preparations for war, and in addition suggested a six-point programme for specific action for peace.

The American Friends Service committee and Friends in England sponsored an unofficial embassy at the general assembly of the United Nations in the autumn of 1950 in the interest of international peace. An international team made up of Friends from England, Sweden, Mexico and the U.S. lived together in New York city and each day visited the sessions of the United Nations. (L. W. R.)

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FRUIT.

World fruit crops in 1950 continued to be maintained at a level some 12% higher than the average of 1935-39. Output in several chief producing countries began to outstrip demand and both internal and export prices tended to ease in consequence. World production of apples was estimated at 585·2 million bu. (11 million imperial tons). This exceeded the record crop of 1949 by 45 million bu. or 8%. Heavy yields from established cider apple orchards

caused this rise. New plantings of table apples, which had been considerable throughout Europe since 1945, were not yet productive, and the world table apple crop was estimated at 385·4 million bu. as against 413·6 million bu. in 1949 but was still 15% above the prewar average of 334·2. World pear production was estimated at 1% below 1949, at 164·1 million bu. As with apples, cider pears were the abundant sorts, and table pears declined from 146·8 million bu. in 1949 to 133·9 million bu., or 23% above prewar. World trade in pears, because of increased shipments from Italy and the Netherlands to the United Kingdom and Germany, ran higher than prewar, whereas shortages of dollars restricted the international movement of apples to levels below those of the 1930s. World citrus production was expected to be at about the 1949 level, or some 332 million boxes—23% above the prewar level; international movements showed some advance but did not regain 1935-39 levels.

United Kingdom. Significant items affecting U.K. top fruit growing were: production of deciduous table fruit, maintained at 50% above prewar levels and continuing a period of unparalleled production; an exceptional cider apple crop for the second year in succession; the release of apples from price control on Aug. 1; the announcement that apples would be imported under open general licence procedure, except from dollar and eastern European countries and Switzerland, as from Jan. 1, 1951; the first postwar public sale of oranges held on May 9; and heavy importation of grapes and peaches from Europe. All this foreshadowed an early return to the prewar condition of near-surfeit of all fruit in the U.K. market. Home growers began to take alarm at the situation, because they had increased their investment since 1945, with the encouragement of the Ministry of Agriculture. Interest in an apple and pear marketing board was revived.

Fruit crops were good, though less than in 1949. Table apples were estimated at 35,500 tons, and table pears at 5,000 imperial tons. Cherries were a good average crop, but plums were light and occasionally scarce. Apples met more difficulty in the market and at peak periods the supply was excessive. Cider apples were particularly difficult to sell owing to an abnormal carry-over of cider stocks by manufacturers. Among table sorts, Cox's Orange Pippin was a medium but well-formed crop, and Worcester Pearmain and Bramley's Seedling were exceptionally good. Quoted wholesale prices for the latter varieties were occasionally as low as 8*s*. and 5*s*. a bushel respectively. Orchard acreage continued to increase; new planting in the 1949-50 season exceeded losses by 3,000 ac., and the highest-ever total of 71,500 ac. was returned for England and Wales.

France. France harvested the unprecedented crop of 192 million bu. of cider apples and 30 million bu. of cider pears.

United States. The U.S. 1950 apple crop was finally predicted at 119 million bu., 11% down on 1949 but 9% above prewar. Pears at 28·6 million bu. were only equal to an average prewar crop. Three-quarters of the pears were grown in the Pacific coast states and some two-thirds of the crop consisted of the canning (Bartlett) type. Other principal fruit crops were smaller than in 1949. Sweet cherries at 60,560 short tons were down by 42%; peaches at 52 million bu., by 26%; and plums at 83,000 tons of 2,000 lb., by 14%. General fruit prices for the autumn and winter season, therefore, opened higher than in 1949. Sour cherries made a record crop, 62% above average, of 150,850 short tons. To assist in stabilizing the price of sour cherries to growers, the U.S. Department of Agriculture purchased over 400,000 cases of canned sour cherries for use in the school lunch programme and other eligible outlets.

Yields of citrus fruits were about the same as in 1949. The manufacture of frozen concentrated citrus juices showed further expansion: from Florida alone, 18 million bu.—30% of the crop—was processed in this way. Consumption of orange juice reached a new level of 6 lb. a head: by the end of the citrus season (Aug.-Sept.) some 1·7 million boxes of oranges, mostly from California, and 191,000 gallons of concentrated orange juice had been exported under the export payment programme for citrus products; the school lunch programme absorbed a further 115,000 cases of Californian orange juice. Also under export payment programmes 2·8 million bu. of apples and 133,000 boxes of pears were disposed of overseas. Exporters shipping fruit under these programmes were paid by the government approximately 50% of the export sales price, but not more than $1·25 for each bushel container.

Canada. The most important crop, apples, was 17% less than that of 1949 at 15·7 million bu. Severe winter weather in British Columbia caused losses of regional apple and peach crops of 20% and 50% respectively. (R. R. W. F.)

FRY, CHRISTOPHER (CHRISTOPHER HARRIS), British playwright (b. Bristol, Dec. 18, 1907), whose mother was one of the celebrated Quaker family, was educated at Bedford Modern. Attracted to the theatre at an early age, he wrote a farce and a verse play before he was 16, and joined a repertory company at 17. However, the need for a more secure living made him take up preparatory school teaching for three years, but he later returned to the stage, first as a stand-in then as director of the Tunbridge Wells Repertory theatre. His first important verse play, *The Boy with the Cart* (1939), was a pageant about St. Cuthman of Sussex written to celebrate a church anniversary. Just before World War II he became director of the Oxford Playhouse but interrupted his career to serve in the Pioneer corps (as a Quaker he refused to bear arms). After the war, the performance of his verse comedy *A Phoenix too Frequent* (1946) at the Arts theatre, London, marked the beginning of his rapid rise in popularity. *The Lady's not for Burning* (1948) ran for nearly 300 performances at the Globe theatre, London, with Pamela Brown and John Gielgud in the leading parts. Later, Sir Laurence Olivier commissioned him to write *Venus Observed* (1950) for which he was awarded the 1950 William Foyle £250 poetry prize; *Ring Round the Moon* (1950), a translation into English verse of Jean Anouilh's *L'Invitation au château*, also highly successful, was still running in London at the end of 1950. Fry's plays were criticized on the grounds that he seemed unable to evolve or handle a plot and appeared to have no " message "; but his sparkling wit and brilliant versification were widely acclaimed; many saw in his work a renaissance of English verse drama.

FURNITURE INDUSTRY. The year 1950 started under comparatively steady trading conditions. The public was still reacting favourably to the new measure of freedom in design which had been granted to the industry. A desire to break away from the stereotyped, uniform suites stipulated by the Board of Trade during World War II was reflected in a satisfactory stream of orders in the furnishing shops. But the retail trade itself waited for the February wholesale exhibition which, it was expected, would show new styles evolved during the years of control and waiting. Unfortunately the exhibition was a disappointment. With some honourable exceptions nothing particularly good in design had been produced. Buyers saw an embellishment of the old controlled designs rather than the evolution of any new style. Large orders were placed by the distributors, however, and this had an interesting repercussion on public demand. Almost immediately a trade recession set in. While the public were waiting for the delivery of the new models, earlier suites and pieces remained unsold. The result was that retail

furnishers found themselves encumbered with large quantities of out-of-date stock which, although representing big sums in capital outlay, were very slow in stock turn-over.

This trade recession became serious. Large London manufacturers worked half time and workers were dismissed. The situation, however, changed as suddenly as it had appeared. By September a renewed demand for furniture set all the factories working to capacity. There seemed little reason for the sudden transition, but the generally accepted belief was that it was due to a fear of furniture shortages, such as those experienced during the war, when the rearmament programme was in full swing.

Side by side with this development was the alarming increase in the cost of most materials used in furniture manufacture. All upholstery and bedding materials made of cotton were affected by the devaluation of sterling; the rocketing of wool prices sent costs of other materials soaring to a level at which it became impossible to maintain the quality of utility furniture at the specified prices. In November representations were made to the Board of Trade for a new schedule of retail prices for utility furniture.

The main controversy in the industry centred round a demand that all furniture should be required by law to be stamped with the name and address of the manufacturers. This proposal was made by the manufacturers themselves and endorsed by the Furniture Development council and the trade unions. It was resisted by the retail distributors but the president of the Board of Trade promised that legislation should be introduced at the earliest possible moment. The object was to prevent sub-standard furniture reaching the market. (L. L.)

United States. The 4,000 factories in the United States making wooden furniture during 1950 recorded a total dollar output for the year of approximately $1,500 million, an all-time record, as compared with $1,175 million in 1949 and $1,335 million in 1948, the previous peak year.

Much of this gain was the result of price increases, which totalled about 18%, but unit production also was stepped up about 12% without fully meeting the heavy demand. At the close of the year the factories had a 48% backlog of orders, or about four months' production. Cancellations during the year were the lowest since 1943.

Modern furniture was in greatest demand, accounting for more than half the industry's production. Eighteenth-century English furniture styles were second in popularity. The trend toward dual-purpose furniture continued to grow.

Although retail store volume slumped during the early winter because of the imposition of credit controls, buying from factories showed little change because dealers were anxious to maintain full inventories to avoid being short-stocked if lumber should be rationed in 1951. Imported furniture accounted for less than 3% of the total amount of furniture sold. (*See* also INTERIOR DECORATION.) (J. A. G.)

FURS. The fur trade was much affected in Great Britain by the imminence of an election in the early part of 1950. The home trade was practically at a standstill and after the introduction of the budget, when it was made clear that no reduction in purchase tax could be expected the outlook was most unpromising. In the autumn, however, consumer buying was most pronounced. The Korean war and an inflationary tendency in the U.S. caused raw fur prices to rise, and the public, realizing that fur garments must be dearer, bought earlier than usual.

A second fur fashion parade was held in June in conjunction with the London fashion fortnight. Substantial orders were booked from overseas buyers. The Association of London Fur designers staged their first show of models in felt, to avoid the use of expensive skins for display purposes. It was the opinion of many in the trade that British fur fashion creations compared more than favourably with those from other fashion centres.

The fashionable furs were almost identical with those in favour last year. Mink, including mutation mink, ermine, beaver and Persian lamb were best sellers in the higher priced furs; musquash, Canadian squirrel, Indian lamb in the medium priced range, and the most favoured inexpensive furs included marmot, beaver lamb, squirrel lock, mole, coney and pony.

The breeding of fur animals proceeded satisfactorily and only the lack of essential foods hindered the production of a far larger number of pelts. British fur breeders were arranging an exhibition of pelts in mink, silver fox, nutria and others in London in Jan. 1951. The export trade in furs was extremely good. Many overseas countries removed or modified their import licensing restrictions to the advantage of the British fur trade. Exports for the first ten months of 1950 amounted to £13,384,728 compared with £8,024,738 for the same period in 1949.

A feature in the import figures was the big increase from non-dollar areas. For the first ten months of the year South-West Africa supplied Persian lamb worth £2,461,279 compared with £628,175 for the same period in 1949. (S. L. L.)

The London fur market served all European countries. It not only financed transactions in furs for all the world but once more became the greatest clearing house for fur skins regardless of their origin. It was the principal source through which Persian lambskins and other furs from the U.S.S.R., Afghanistan and South-West Africa were distributed. The fur industry in Western Germany, with headquarters in Frankfurt, steadily expanded its business with surrounding European countries as well as with London and New York.

United States. The fur industry in the U.S. showed improvement during the first eight months of 1950 but experienced a severe slump in the last quarter. Ranch mink was the leading fur during the year. About 2,800,000 skins entered the U.S. market. Most of these were produced in the U.S. and Canada. Norway, Sweden, Denmark, Finland and the U.S.S.R. produced a total of about 500,000 skins, the best of which went to the U.S. Breeding of mutation mink, or mink of many colour variations, increased and proved profitable. "Sapphire" mink was introduced, the colour of which is well described by the name.

Early in 1950 raw fur prices advanced. Retail business was satisfactory during August but poor in the fall and early winter. A mild fall in the eastern half of the country forced fur clothing prices down. Reduced prices and wintry weather stimulated business slightly in December. Nevertheless, many firms, mostly manufacturers and retailers, became insolvent. Failures during the year totalled more than 200 with liabilities estimated at $9 million. Most of them were in the New York city area.

The United States was the largest consumer of furs. The government collected about $29 million from the 20% retail fur tax during the first nine months of 1950 as compared with about $33 million for the corresponding period in 1949.

New York remained the world's leading fur processing and retailing centre. The New York fur fashion show and exhibition on June 5-6, attended by more than 5,000 people, was the most complete display of fur clothing ever presented. There was marked consumer demand for capes, scarfs, stoles, shawls and jackets, especially in mink, induced by inflated prices for full-length coats. There was little change in fur fashions except for less sweep and a return of the pyramid silhouette. Paris style influence dominated. (W. J. BT.)

GABON: *see* FRENCH EQUATORIAL AFRICA.

GAITSKELL, HUGH TODD NAYLOR, British economist and politician (b. London, April 9, 1906), was educated at Winchester and New college, Oxford. After lecturing in the department of adult education, University college, Nottingham, he joined the staff of the department of economics, University college, London, in 1928, becoming in 1938 head of the department and reader in political economy in London university. In 1933-34 he studied in Vienna on a Rockefeller scholarship. Meanwhile he had started his political career as a speaker in the general elections of 1929 and 1931; but he failed to gain the seat at Chatham which he contested in the 1935 election. On the outbreak of World War II he joined the newly formed Ministry of Economic Warfare; he later became head of the German Intelligence section. When Hugh Dalton became minister in 1940, Gaitskell became his principal private secretary and in 1942 accompanied him to the Board of Trade as principal assistant secretary. In 1945 he was made a C.B.E. and in the general election of that year was returned as Labour member for South Leeds. In 1946 he became parliamentary secretary to the Ministry of Fuel and Power; he was made minister in 1947, when he was sworn of the Privy Council. After the general election of Feb. 1950 Gaitskell became minister of state for economic affairs and began to take some of the burden of work from the chancellor of the exchequer, Sir Stafford Cripps (*q.v.*). In March he attended a meeting of the O.E.E.C. consultative group in Paris and of the Atlantic Treaty defence, finance and economic committee in London. In April he went to the Western Union council meeting and, in June, to O.E.E.C. meetings in Paris. He took a large part in the establishment of the European Payments union and had been acting head of the Treasury after Sir Stafford Cripps went on sick leave in early August. From Oct. 8 to Oct. 20 he visited the U.S. and Canada for informal discussions with those concerned with economic affairs. On Oct. 25 he took Sir Stafford's place as chancellor of the exchequer.

GAMBIA. British colony and protectorate on the west coast of Africa surrounded by the French territory of Senegal. Area: 4,033 sq.mi., incl. 69 sq.mi. for the colony. Pop.: (1931 census) 199,520; (1949 est.) 276,000, almost entirely African with Arab admixture. Capital, Bathurst (1944 est. 21,152). Language: many tribal dialects, Hausa. Religion: predominantly Moslem, some pagan, *c.* 5,000 Christians. Administration: governor; executive council, 4 official and 3 African unofficial members; Legislative Council, 3 *ex officio*, 4 nominated official, 5 nominated unofficial and 3 elected members. Governor, Percy Wyn Harris.

History. Constitutional changes were announced in Sept. 1950. The number of members of the Legislative Council was increased from 13 to 15 by the addition of one official and one unofficial member. The colony was given a full electoral system, electing three members to the council instead of being represented by one elected and one nominated member. The five nominated unofficial members included four nominated on the recommendation of the divisional conferences in the protectorate. A Gambian was to be appointed vice president of the Legislative Council and after this appointment the governor was to begin to withdraw from active participation in the council. In July, the high commissioner of French West Africa visited the colony. Plans for closer co-operation between the two territories were agreed.

Finance and Trade. Currency: West African pound (£WA 1=£1 sterling). Budget (1949): revenue £967,000; expenditure £1,112,000. Foreign trade (1948): imports £2,621,024; exports £1,758,384. Principal export: groundnuts. (K. E. R.)

GAMBLING: *see* BETTING AND GAMBLING.

GAS. The gas industry of Great Britain passed into public ownership on May 1, 1949, so that the first clear year's working under the new conditions was 1950. It can be described as a year of settling down under the new regime with steady progress all round. Neither the Gas council, established to co-ordinate the work of the area boards, nor the 12 area boards between which the industry was divided, had published their reports on the first year's working by the end of the year, but statements on progress had been made on various occasions. The production of gas increased steadily showing a gain of 3% or some 50 million therms over 1949. The increase was in coal gas as the production of water gas declined. There was also a small increase in the amount of gas purchased from coke ovens. Coal deliveries to gas works increased during the year by nearly 4%.

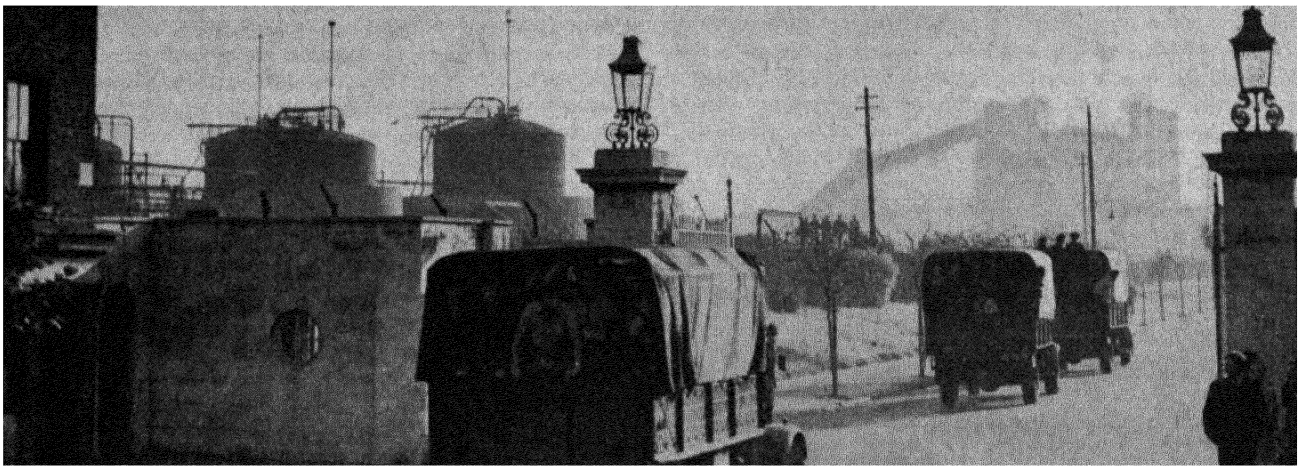
Considerable capital extensions were undertaken during the year to meet the growing domestic, commercial and industrial demand for gas. The government's restrictions on capital expenditure, however, resulted in the plant available, particularly in areas with heavy industrial loads, being unable to keep up with the increased demand.

Although the horizontal retort was still predominant it was mainly found in small works; in the larger works it had largely been replaced by continuous vertical retorts. At Beckton gas works there was an extension to the coke oven plant and a new coke oven plant was installed in December at the Greenwich works of the South Eastern Gas board. Intermittent vertical retorts had also been favoured as they were able to cope with coals of lower caking power. Carbonizing efficiency continued to increase with the installation of new plant and in modern vertical retorts at least 80% of the energy in the coal was recovered in the form of gas, coke and by-products.

The trend towards greater overall efficiency by concentration on the larger and more efficient plants, the closing down of smaller inefficient units and the linking up with regional gas grids continued during the year. On the distribution side the laying of new mains and the linking up of small towns and villages had increased the number of consumers, which was now almost 12 million. The domestic consumer remained the backbone of the industry, accounting for about 70% of total consumption. Commercial and industrial consumers, however, took up a much higher percentage in the industrial parts of the country. Prepayment consumers with slot meters were two-thirds of the total of domestic consumers.

The production of coke during the year was lower than in 1949 and owing to the lower coal output stocks of coke, instead of being an embarrassment as in 1949, were barely sufficient to meet the increasing demand. Sales of other by-products, such as tar, creosote and pitch, fell off in the earlier part of the year but the development of the defence programme increased the market rapidly.

Cooking was the basic load of the gas industry, as over 80% of the population cooked by gas. The production of gas cookers increased during the year and approached the prewar peak of 800,000 new cookers. Wash boiler production was in the neighbourhood of 400,000, but water heaters, largely because of the heavy purchase tax, barely reached 150,000. The production of gas meters rose from 105,000 to nearly 130,000. The design of gas appliances received much attention during the year. New models of cookers, water heaters, wash boilers and washing machines were brought forward by the manufacturers, and many of them showed considerable improvement not only in efficiency, but also in ease of use, maintenance and general appearance. A number of new models of gas-ignited coke grates were also seen for the first time. Drying cabinets, which are useful for clothes drying in flats and used where there are no



Troops driving into the Beckton gasworks, London, on Oct. 5, 1950, to take over the duties of maintenance men who had been on strike since Sept. 16.

outside facilities, were seen in larger numbers and a new shower unit was introduced for use without separate bathrooms.

The long-standing difficulty about the resale price of gas in apartment houses, flats and hotels came nearer to a solution as several area boards announced a fixed maximum increment, usually of 3*d.* a therm. Big efforts were made during the year to straighten out the differences in prices and conditions, not only for gas itself, but also for appliances like cookers, water heaters, refrigerators and fires and the cost of installing equipment. In some areas the prices of appliances had already been made uniform, and the Gas council started negotiations to try and achieve uniformity in all areas. On the gas side, a considerable amount of progress was made in simplifying flat rates and tariffs, but only one board, the North Thames Gas board, was able to announce completely uniform prices throughout its area.

Labour conditions during the year were satisfactory, except for a strike of maintenance men in the London area in September which brought back for a period of three weeks wartime conditions of no street lighting and barely sufficient gas for cooking.

Europe. The nationalized French gas industry made further progress towards a planned regional economy during the year. Prices, however, were again drastically increased, with the aim of getting into line with other prices by the beginning of 1951. It was placing greater importance on the by-products of carbonization, coke, tar, benzole and others. It also made greater efforts to improve coke distribution.

Czechoslovakia claimed considerable improvements in laying down long-distance pressure mains to link all gas works and to supply neighbouring towns. In North Bohemia the utilization of brown coal in gas production was being developed. During the year the percentage of gas from gas works declined from 71·7% to 52·7% of the total, whereas coke-oven gas increased from 9·5% to 21·2% and brown-coal gas from 18·4% to 22·3%. The balance was accounted for by natural gas which increased from 0·4% to 3·8%.

In several other European countries progress was made towards the laying of regional grids and concentration on the most efficient gas works.

United States. The biggest development in the U.S. continued to be the distribution of natural gas which in the eastern districts had been carried to most cities and large towns and was offering enormous prospects for the central heating of houses, flats and offices. Moreover, air conditioning was taking root in houses and flats, and plant operated by gas was selling in greatly increased quantities. (L. HDN.)

GAS TURBINES: *see* JET PROPULSION AND GAS TURBINES.

GEMS. In 1950 a succession of national and international crises caused periods of " panic " buying of gems. In the intervening periods it appeared as if the long-expected world-wide depression might materialize. Turnover for the year was remarkable and little less than that of 1949, which was found to be better than first expected. This produced a noticeable amount of fluctuation in values; and prices of ordinary commercial quality goods eased appreciably, since merchants were somewhat overstocked and some purchasers offered for re-sale purchases made during the boom period of 1947. Stones of fine quality and more than average size, however, remained scarce and therefore continued to appreciate slowly in value in spite of an apparent difficulty in finding buyers. Dealers in particular became increasingly critical of the quality of the goods for which they were willing to offer. A reversion to the competitive conditions that prevailed before World War II had not yet begun to supersede indifference to making a transaction or not. It was a difficult period for all branches of the trade and called for thought about future policy.

Scientific interest centred upon a technique for obtaining the refractive indices of cabochon stones on the refractometer. This had been developed at the Gemological Institute of America. The procedure was simple but required care and practice; in spite of certain limitations, however, such as the inability to detect and measure bi-refringence, it was an improvement on the immersion and " white line " (estimation) methods previously used. Subsequent experiment showed that the substitution of a low-power lens for the eyepiece made this operation easier and that the procedure might be important in the case of faceted stones that failed to give a reading by ordinary means (except those whose indices of refraction were above the range of the instrument). This applied particularly to very small specimens and to paste and the less durable varieties in which the table facet might not be perfectly flat. (*See* also DIAMONDS; MINERALOGY.)

(F. E. LK.)

GENETICS. Geneticists celebrated the jubilee of their science in 1950, just 50 years after the rediscovery of Gregor Mendel's famous papers on the laws of inheritance in the garden pea. To mark the event, the classical papers of Hugo De Vries, C. Correns and E. Tschermak, who in 1900 simultaneously confirmed Mendel's findings, were republished in English translation, together with the letters of

Mendel to the botanist Carl Nägeli during the years 1866-73. The astonishing development of genetics during its first 50 years was reviewed by R. Goldschmidt, in an article prepared for the jubilee meeting of the Genetical Society of America in Columbus, Ohio. Although biologists throughout the western world almost universally accepted the Mendelian laws, a group of Soviet scientists, however, led by I. E. Glushchenko, used the seventh International Botanical congress, in Stockholm, to attack the established principles of the subject and to expound the doctrines of T. D. Lysenko.

Interest during the year was concentrated (1) on mutation, especially as induced by radiations; (2) on the role of the cytoplasm in heredity; and (3) on biochemical genetics.

Mutation. Barbara McClintock published an account of experiments on mutable loci in maize. Whereas most genes in maize as in other organisms are remarkably faithful in their reproduction, a few had long been known to be subject to frequent mutation, even under natural conditions. McClintock, however, found that a considerable number of genes which were normally stable could be made to mutate repeatedly. This new mutability was shown to be caused by the action of certain chromosomal material away from the mutating genes themselves. Evidence was given to show that this material, the so-called "activator locus," involved heterochromatin.

The increasing subjection of living organisms to ionizing radiations in peace and war stimulated further work on the effects of radiation on the genetic material; yet it was apparent that exact knowledge of the mechanisms by which genes and chromosomes could be altered as a consequence of irradiation was lacking. George Lefevre, after careful analysis, could find no evidence that X-rays induced "reverse" mutations (*i.e.*, mutations from a mutant back to the wild type) in *Drosophila melanogaster*. From a comparison of spontaneous mutations with those induced by X-rays it was concluded that the two phenomena were different and that probably the mutations induced by ionizing radiation were losses or destruction of genetic material. O. Wyss and his colleagues, working on the irradiation of bacteria with ultra-violet light, obtained further evidence that the radiation affected the organisms indirectly; *viz.*, by stimulating the production in the medium of certain active chemicals, which then induced genetic changes in the bacteria. H. J. Muller, in an extensive review of problems of radiation genetics, pointed out the importance of "detrimental" mutations, which are neither completely lethal nor "visible"; such detrimental mutations, with very small effects on a single individual, could in the end be even more damaging than the complete lethals, since the detrimentals would be able to spread more easily through a population.

The Cytoplasm. T. M. Sonneborn, in a survey of the part played by the cytoplasm in heredity, declared that two fundamentally different forms of cytoplasmic heredity should be recognized. The first of these was based on self-duplicating, mutable cytoplasmic particles or plasmagenes, which could possibly depend on the presence of certain nuclear genes for their maintenance or normal functioning but not for their origin or specificity. Many examples of this kind of plasmagene were cited; *e.g.*, the "kappa" particles in *Paramecium aurelia*, the plastids in green plants and the carbon dioxide resistance factor "sigma" in *Drosophila melanogaster*. It was realized that such plasmagenes were probably very diverse and might show but little similarity to the nuclear genes. Some at least of them seemed to be indistinguishable from some kind of parasitic or symbiotic micro-organism, such as a virus: for this reason many biologists objected to the use of the word "plasmagene." In spite of disagreement on the theoretical significance of the "kappa" particles in *Paramecium aurelia*, a great deal of information concerning their nature and function was obtained.

The second form of cytoplasmic heredity discerned by Sonneborn was more obscure, though there were signs that it would turn out to be of great significance for the understanding of the causes of somatic cell differences in higher animals and plants, one of the most formidable problems of biology. The characters which showed this form of cytoplasmic heredity were the antigens in *Paramecium aurelia*. It was found that a single race of *Paramecia* could develop, at different times, a whole series of different, mutually exclusive antigens, without any variation in the genes present. Such diverse antigens were found to be controlled by diverse kinds of cytoplasm. Nevertheless it was also found that the specificities of the antigens were closely controlled by the genes present in the nuclei. The function of the cytoplasm here seemed to be to permit the manifestation of certain genes while inhibiting others. But the physical basis of this type of cytoplasmic heredity remained unknown.

Biochemical Genetics. The 102nd meeting of the Genetical Society of Great Britain was devoted to biochemical genetics, and 17 abstracts were published. Progress was reported on many topics, including chemical mutagens, biosynthesis of gene-products, the structure and composition of nuclear membrane, nuclear sap and chromosomes, etc.

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GEOGRAPHY. It was perhaps difficult to distinguish any one event or field of study as being of dominant interest in the year 1950. Everywhere there was evidence of a growing appreciation of the relevance of geographical studies to the understanding of the contemporary world, and this was still more apparent in the proceedings of conferences where geographers met to present the results of their researches.

Section E (Geography) of the British Association for the Advancement of Science was perhaps the meeting of widest interest though it was but part of an all-embracing congress of British men of science. In 1950 it was held in Birmingham from Aug. 30 to Sept. 6 under the general presidency of Sir Harold Hartley (*q.v.*) whose own presidential address was on the theme of "Man's Use of Energy." The presidential address to Section E was delivered by Professor S. W. Wooldridge of King's college, London, on the origin and significance of the upland plains of Britain. It was followed by other papers on the same general topic: the evolution in Tertiary geological times of the topography of the British Isles. Whether such matters should lie within the scope of geography as a study of the human environment had always been debated, but Professor Wooldridge made it clear that even such economic factors as soils and land use are intimately related to the remote history of the land. Many of the papers read were on more intimate details of the Birmingham region and, with the excursions that alternated with them, they served to remind the armchair traveller that geography begins at home although the whole world is its province.

The Institute of British Geographers met in Cambridge in January and the Geographical association, which is primarily concerned with the teaching of geography in schools, met in London at the same time.

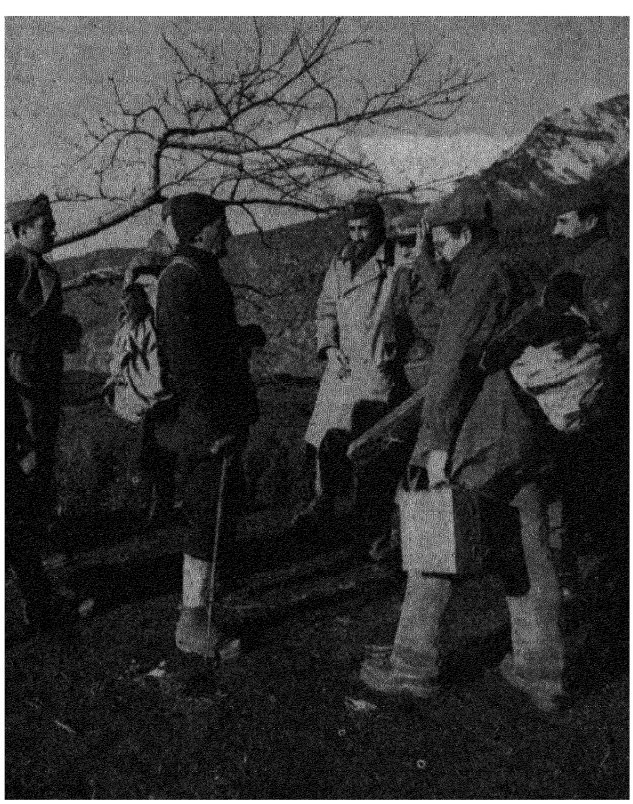
The French inter-university geographical congress met in the summer, not to hear papers read, but to travel from Bordeaux through the country of Périgord and discuss problems in the field. Again the emphasis was on the

evolution of land forms and on the evidences of the climate of Aquitaine in the Ice Age; but even this remote topic is not unrelated to the land use of modern times.

The Association of American Geographers met at Clark university, Worcester, Massachusetts, in April. Its programme included a symposium on the management of the world's natural resources and another to celebrate the centenary of the birth of William Morris Davis, the father of modern conceptions in physical geography.

A meeting of the executive committee of the International Geographical union in London in August was convened by the president, Professor George B. Cressey (U.S.), and attended by the vice presidents from European countries and from India; its purpose was to outline plans for the forthcoming international congress in the U.S. in 1950. The year saw the inauguration of the International Geographical union's *Newsletter* which would be published twice a year, in French and English, to keep geographers informed of the official activities of the union and the commissions which it had set up to study particular problems, and of the work of their colleagues in other lands. The proposals of the commission on the utilization of land throughout the world amounted to a plan for the preparation and publication of a complete set of maps on the scale of 16 mi. to an inch. Much of the material for such a series was already available if it could be brought together and reduced to a common set of symbols, but for countries where the detail was lacking observers had to be trained and agencies set up. The value of a survey of this nature in a changing world was well illustrated by that completed in Britain in the years before World War II. It proved an indispensable basis for the wartime transformation of agriculture and the assignment of land to other wartime uses.

The year 1950 marked the 100th anniversary of the inception of the American Geographical society, although its official centenary would take place in 1952 to celebrate its incorporation as an institution. Its director, Dr. J. K. Wright, long associated with all the society's activities, retired during the year, his place being taken by Professor George H. T. Kimble of McGill university, Montreal, who was also secretary of the International Geographical union. The American Geographical society's three gold medals were awarded in 1950 to Hans Ahlmann, Professor L. Dudley Stamp and Professor Robert L. Pendleton. Late in 1949 Dr. Ahlmann, the eminent Swedish glaciologist, had been the recipient of a dedicatory volume of essays by other workers in that field to mark his 60th birthday. The essays were in themselves a notable contribution to the literature of the subject.



The director of the Mount Etna observatory (centre) with a military patrol on the side of Mount Etna during the eruptions in Nov. 1950.

The gold medals of the Royal Geographical Society of London were, with the King's approval, awarded to Professor Harald Sverdrup, the Norwegian glaciologist and oceanographer; and to George F. Walpole, director of lands and surveys in the kingdom of the Jordan, to mark not only his achievements as a surveyor in that country but his earlier explorations in the Egyptian desert. The society's Victoria medal was awarded to Professor Emmanuel de Martonne of the University of Paris.

Among the research publications of the year in English, one of more than specialist interest was a paper by F. H. W. Green on urban hinterlands in England and Wales. Defining an urban hinterland as the countryside which associates itself with one particular urban centre rather than with neighbouring centres, the writer proceeded to distinguish the centres, and the approximate boundaries of their hinterlands by an analysis of the public motor bus services operating in 1947-48 for which very detailed tables were available. The number of units thus discovered was approximately 700 and the average area of the unit about 80 sq.mi. These figures agreed well with earlier attempts to distinguish effective centres of urban influence and it was shown that, although public transport might appear an arbitrary criterion for such a survey, the boundaries so laid down were consistent with those which are defined by such diverse activities as weekly shopping and attendance at voluntary associations. Their shapes were shown to reflect a variety of physical, economic and social factors which frequently do not correspond with the existing administrative divisions of the country. The value of such a survey to future planning was evident. The paper included a map of the hinterlands.

Any account of geography in the year 1950 must include a notice of the deaths of a number of eminent geographers. The influence of Isaiah Bowman extended far beyond the university schools of geography for he had been employed as chief territorial specialist on the American Commission to Negotiate Peace in 1918 and 1919 and he served in a similar capacity at the San Francisco conference in 1945. As a young man he had made three expeditions to the Andes, from 1915 to 1935 he was director of the American Geographical society and from 1931 to 1934 president of the International Geographical union. His name is perpetuated in the Isaiah Bowman School of Geography in the Johns Hopkins university at Baltimore, Maryland.

Hugh Robert Mill, a former librarian, and later vice president, of the Royal Geographical society, was distinguished especially as an historian of Antarctic exploration and as a meteorologist and had been director of the British Rainfall organization from 1901 to 1919 when its valuable records were handed over to the Meteorological Office. At the turn of the century he had been intimately associated with Sir Halford Mackinder in the reform of geographical education in England.

William O'Flaherty Lynam had worked for 40 years at the British museum and was superintendent of the map room

from 1931 until his death. He had made a special study of early English maps and plans of estates and had been instrumental in collecting and saving from destruction many of the manuscript maps which were afterwards deposited in the British museum and elsewhere. (*See* also CARTOGRAPHY; EXPLORATION AND DISCOVERY; GEOLOGY.)

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GEOLOGY. To mark the progress of geological thought in 1950 the following events may be selected, perhaps arbitrarily, from a great mass of work.

Physical Geology. Glaciology had only recently emerged as a branch of widespread study when in 1947 the *Journal of Glaciology*, London, was inaugurated. Hans Wilhelmsson Ahlmann was undoubtedly the pioneer. On his 61st birthday a volume dedicated to him was prepared with 33 contributions on glaciers and climate (*Geografiska Annaler*, Stockholm, 1949). Ahlmann always succeeded in developing international co-operation. He planned and arranged, with H. Sverdrup, director of the Norsk Polarinstitutt, Oslo, and with British scientists, the first large international polar expedition: the Norwegian-British-Swedish expedition to Queen Maud Land (1949-52). In 1950 its base, Maudheim, was established and the geological programme began towards the end of the year.

The Falkland Islands Dependencies survey completed the first stage of its geological survey in 1950. The main party of scientists, led by V. E. Fuchs, was relieved after wintering an extra year at Stonington Island. (*See* ANTARCTICA.)

An important geological and glaciological expedition in 1950 to Baffin Island was led by P. D. Baird, director of the Arctic Institute of North America.

The geology of sea and ocean floors emerged as a distinctive branch of study at the International Geological congress in 1948. *Submarine Geology* (New York, 1948) by F. P. Shepard appeared after this and was the first general text-book in this field. Shepard continued his studies of submarine canyons and published some fine underwater photographs of these features near the Scripps Institute of Oceanography, California (*Bull. Geol. Soc. Amer.*, vol. 60, pp. 1597-1612, 1949). From the same institute an important experimental investigation of heat flow through the sea floor was initiated by E. C. Bullard. In 1950 the first results of Hans Petterson's deep-sea expedition appeared. K. O. Emery published a valuable summary, with an extensive Russian bibliography, of results of work on the topography and sediments of the Arctic basin (*J. Geol.*, vol. 57, p. 512, 1949). In the east Atlantic, seismic work by M. Hill showed 1,300 ft. of sediments with velocity increasing to 8,000 ft./sec. with 6-9,000 ft. below and a velocity of 16,000 ft./sec. Below this, rocks of velocity 20-21,000 ft./sec. extend to unknown depth. (*See* OCEANOGRAPHY.)

In *Seismicity of the Earth* (Princeton, 1949) B. Gutenberg and C. F. Richter summarized the geological regions of the earth's surface in relation to their structure, tectonic and recent seismic history. Charts of each region showed the distribution of important earthquakes in the previous 50 years. They were also analysed according to date depth, magnitude and position, in tables forming half the book. (*See* SEISMOLOGY.)

The Department of Geophysics, Cambridge university, continuing its gravity surveys, extended a network of stations across Ireland. Negative anomalies were recorded over granites as in Leinster, northwestern Donegal and Galway. In Britain the Geological survey began the preparation of maps with gravity data printed as transparent overlays to the quarter-inch/one mile geological sheets. A new gravity traverse of Australia was made.

Petrology and Tectonics. C. E. Tilley, as president of the Geological Society of London, presented the Wollaston medal, its highest award, to N. L. Bowen, of the Geophysical laboratory at Washington, in recognition of the detailed and ingenious work by Bowen and his associates for many years in experimental petrogenesis. In their study of the system MgO-SiO_2-H_2O (*Bull. Geol. Soc. Amer.*, vol. 60, pp. 439-460, 1949) Bowen and O. F. Tuttle drew the conclusion that there was "no likelihood that any magma can exist that can be called a serpentine magma and certainly no possibility of its existence below 1,000°C. There seems no escape from the conclusion that ultramafics can be intruded only in the solid state."

Two important publications in 1950 established geochemistry as a distinctive discipline: *Geochemistry* by K. Raukama and Th. G. Sahama (Chicago, 1950) was the first comprehensive text book in English in this field; and a new journal *Geochimica et Cosmochimica Acta*, London, was launched.

A new building for the Department of Geology and Mineralogy in Oxford was opened in 1949; and in 1950 Professor Douglas retired and L. R. Wager was appointed in his stead. W. A. Deer went to Manchester, K. C. Dunham to Durham and J. H. Taylor to King's college, London. All were petrologists.

J. H. Taylor gave his inaugural lecture on "Petrology in the Study of Sedimentation" (*Science Progress*, vol. 38, pp. 652-667, 1950). He reviewed the contemporary status of work in this field and stressed the importance on the one hand of more complete field data and on the other of rigorous statistical laboratory techniques.

Granites continued to attract attention. The Geological Society of London already had a William Smith lecture by P. E. Eskola on "Mantled Gneiss Domes" and a second presidential address by H. H. Read on "Plutonism." From Nanga Parbat P. Misch described new field evidence of synkinematic granitization. Regional metamorphism and deep batholithic formation belonged fundamentally to a geosynclinal orogeny. Post-orogenic static granitization at higher levels was described from Yunnan (*Amer. J. Sci.*, vol. 247, pp. 209 and 372, 1949).

Bruno Sander's *Einführung in die Gefügekunde der geologischen Körpen* (Innsbruck, part i 1948, part ii 1950) continued the lead of the Austrian school in the field of orientation studies. The application to tectonic analysis as developed by Sander was becoming fashionable in numerous papers on structure in 1950 and with more apparent effect than in purely mineralogical studies. New editions of standard text books stressed this application: for example, C. M. Nevin's *Structural Geology* (4th ed., New York, 1949). H. W. Fairbairn's *Structural Petrology* (2nd ed., Cambridge, Mass., 1949) was the principal treatise in English.

Another method of tectonic analysis long used only in Switzerland was summarized by R. Helbing in his *Studies in Photogeology* (Zürich, 1950).

Stratigraphical and Regional Geology. Regional and stratigraphical studies have multiplied since World War II to overwhelming proportions.

Sir T. Edgeworth David published the first geological map of Australia with notes to accompany it. On his death in 1934 W. R. Browne was asked to edit his manuscript for a comprehensive work: *The Geology of the Commonwealth of Australia* (3 vol., London, 1950), revised in the light of later discoveries, became the authoritative treatise describing the historical, physical and economic geology, together with a new map in four sheets.

Lower Ordovician rocks were discovered for the first time

in the Kimberley division of Western Australia and Devonian and carboniferous rocks on the west coast, by the Federal Geological survey.

The death of A. L. Du Toit robbed South Africa of one of its most distinguished geologists and the southern hemisphere of one of its keenest students. R. Broom, awarded the Wollaston medal in 1949 for his impressive research on fossil man, added further important discoveries in South Africa in 1950.

At the request of the government of the Netherlands East Indies, R. W. van Bemmelen had prepared three massive volumes (published 1950) on the general and economic geology of the East Indian archipelago, illustrated with maps. This was a suitable tribute to the work of the Geological Survey of the Netherlands East Indies begun 100 years earlier.

H. A. Brouwer delivered the sixth William Smith lecture to the Geological Society of London on "The Movement of Island Arcs." He was also co-author of *Geophysical Explorations in the Island of Celebes* (Amsterdam, 1947).

K. Washington Gray described a tectonic window in south-western Iran (*Q. J. Geol. Soc. London, 105*, p. 189, 1950) and demonstrated thrusting with a horizontal movement of approximately 30 mi. in pre-Maestrichtian time.

A new geological map of central and southern Sweden to a scale of 1 : 400,000 was published in 1950 by the Swedish Geological survey. *A Palaeogeographical Atlas of the British Isles and adjacent parts of Europe* by L. J. Wills (London, 1950) was a worthy successor to his *Physiographical Evolution of Britain*. Although published in 1948, five sheets of the 1: 1,000,000 general geographical map of China were received in 1950.

Economic Geology. By 1950 China had achieved an internal stability which was accompanied by a re-organization and re-deployment of her geological services. All government geological work was united and directed by J. S. Lee under the Academia Sinica (Ko Shueh Yuan). Provincial surveys were co-ordinated and controlled from the new headquarters in Peking. The whole emphasis was further shifted from purely academic research to the systematic survey of Chinese economic wealth, and the largest part of her technical skill was directed to the rich territories of Manchuria.

In the Natal coalfield the distinction between the varieties of Karoo dolerites recognized some time ago proved of value in 1950 in elucidating the structure and stratigraphy of the coalfield.

The Geological Survey of Great Britain, in pursuance of its intensive investigations in conjunction with the National Coal board, found further hidden coal resources in the midlands. A deep boring at Whittington Heath in Staffordshire between the Cannock Chase and Warwickshire coalfields proved the existence of over 30 ft. of workable coals at depths of between 2,400 and 3,350 ft. W. J. Pugh succeeded W. F. McLintock as director of the survey. Successful experiments in the burning of coal *in situ* were conducted for the first time in Britain.

Imperial Chemical Industries and Fisons Ltd. continued the boring programme in north Yorkshire begun earlier in the search for oil. They reported satisfactorily on the presence of considerable potassium chloride deposits. Sylvinite and polyhalite were discovered with considerable deposits of halite about 400 ft. deep. The minimum area proved was estimated to contain over 200 million tons with an expected yield of 500,000 tons of potassium chloride annually for 140 years. The age of the deposits was Permian and approximately the same horizon as the Stassfurt deposits. (*See* also MINERALOGY; OCEANOGRAPHY; PALAEONTOLOGY; SEISMOLOGY.) (W. B. HD.)

GEORGE VI (ALBERT FREDERICK ARTHUR GEORGE), King of Great Britain, Ireland and the British dominions (b. York cottage, Sandringham, Norfolk, Dec. 14, 1895); for his earlier career see *Encyclopædia Britannica*. By the Indian Independence act of 1947 the United Kingdom consented to the omission of the words "Emperor of India" from the King's titles and this was given effect to in a proclamation made on June 22, 1948. On Jan. 26, 1950, India was proclaimed a sovereign independent republic within the Commonwealth of Nations, but in 1949 it had said that it would accept the King "as the symbol of the free association" of the Commonwealth countries and, as such, head of the Commonwealth. Although Eire had formally declared herself a republic and seceded from the Commonwealth on April 18, 1949, there had been no further modification of the King's title by the end of 1950.

On March 7, 1950, the King welcomed the President of France and Mme. Auriol, who were paying a short state visit to England; on the evening of that day the King invested President Auriol with the G.C.B. On St. Patrick's day the King, as colonel in chief of the Irish guards, presented shamrock to the officers on the occasion of the 50th anniversary of the regiment's establishment. At the end of March he



King George, with Queen Juliana of the Netherlands, leaving Victoria station in an open landau, during the queen's state visit to London, in Nov. 1950.

visited the Aldershot garrison. It was announced during the month that the King and Queen would grant their patronage to the 1951 Festival of Britain, and in May the King visited the South Bank site of the festival. In April he visited Stratford-on-Avon, saw a rehearsal of *Julius Caesar* and attended a performance of *Henry VIII* at the Memorial theatre. It was announced that he had become air commodore in chief, Royal Observer Corps. In May he opened the new building of the National Institute of Medical Research, Mill Hill, London, and at the end of the month received Commonwealth military representatives who had attended exercises at the staff college, Camberley, Surrey. In June he visited Sherborne school and re-opened the College dormitory of Westminster school, damaged in World War II. Also in June he attended the 50th anniversary party of the Wallace collection, London, and at Buckingham palace presented the Lord Esher Efficiency Challenge trophy to 604 (County of Middlesex) squadron, Royal Auxiliary Air Force. On July 7 the King attended the R.A.F. display at Farnborough, Hampshire, and later in the month visited Exeter and Duchy of Cornwall lands in the west of England with the Queen and Princess Margaret (*q.v.*). On July 27 he unveiled the Metropolitan Police Roll of Honour in Westminster abbey. Twice during the year the King opened parliament in state: on March 6, after the general election; and on Nov. 1. In October, he attended the ceremony in Westminster hall marking the opening of the new chamber of the House of Commons and replied to addresses presented by the lord chancellor and the speaker. In late November Queen Juliana and the Prince of the Netherlands paid a state visit to England and the King decorated the Dutch queen with the Royal Victorian chain. On Dec. 5 he inspected the 1st Royal Dragoons at Chester. On the following day, paying his first visit to the Old Vic theatre, London, he saw a performance of *Twelfth Night*. On Dec. 12 it was announced that the King had assumed the Territorial Efficiency decoration: his territorial army commission dated from 1920. On Dec. 25 he broadcast from Sandringham a Christmas message to the peoples of the Commonwealth.

GEORGESCU, TEOHARI, Rumanian politician (b. Bucharest, Jan. 31, 1908). The son of a tradesman, he entered the printing plant of Scrisul Românesc at Craiova in 1923, after four years at an elementary school, and in 1929 joined the Communist party of Rumania. In 1933 he was sentenced to three years' imprisonment for having taken part in organizing a strike in the Grivița railway workshop. From 1936 he was secretary of the Bucharest branch of the party, but in 1941 was interned at the Târgu-Jiu concentration camp. Freed by the Soviet army, he became under secretary of the interior in the Rădescu cabinet (Dec. 2, 1944) and minister of the interior in the Groza cabinet (March 3, 1945). As such, he was in charge of a drastic purge of all persons described as supporters of the Axis powers. On Nov. 19, 1946, and on March 28, 1948, he was elected deputy from Timiș-Torontal. As a member of the Politburo Georgescu was also responsible for purging the Workers' (Communist) party formed by the merger with the Socialist party in March 1948; on July 20, 1950, it was announced that the party membership had been reduced by 190,000, comprising more than one-fifth of the total. On March 16 he was appointed a deputy prime minister.

GERMAN LITERATURE. Though Germany's 12-year isolation seemed to have been overcome at last, few native publications of 1950 were worthy of a high place in the literature of Europe. Nevertheless, many interesting works appeared, dealing directly or indirectly with the analysis of contemporary conditions. A feature of the publishing year in Western Germany was the number and popularity of translations, especially of American and British fiction.

Ernst Jünger, around whom a fierce controversy had raged since the Allied occupation, followed up his war diary *Strahlungen* with a novel, *Heliopolis*, which attempted to delineate the essence and significance of current and coming events. Stefan Andres, with similar aims, denounced the corruption of absolute power in his novel *Das Tier aus der Tiefe*, the first volume of a trilogy entitled *Die Sintflut*. Hans Henny Jahnn, in *Das Holzschiff* and other writings, depicted the fundamental menace to mankind of demonic personalities.

The authors of the works mentioned dealt with imaginary worlds and groped after the underlying truths of human life. Other writers presented the realities of existence and, from the standpoint of contemporary conditions, described, criticized, accused or broke new ground. Such were Walter Jens, with *Nein—Die Welt der Angeklagten;* Arno Schmidt, with *Leviathan;* and Jürgen Rausch, with *Nachtwanderung*. The theme of Albrecht Goes (*Unruhige Nacht*), of Ehrhart Kästner (*Das Zeltbuch von Tumilad*, an account of experiences as prisoner of war in the Western desert) and of Hermann Kasack (*Der Webstuhl*) was in each case the glimmer of light that could be found in the darkest situation. One of the outstanding books of the year was Gerhard Nebel's *Unter Kreuzfahrern und Partisanen*, a thoughtful account of the closing stages of the Italian campaign.

Two of Germany's best-known writers, Elisabeth Langgässer and Ernst Wiechert, died during the year (*see* OBITUARIES.) The former's *Märkische Argonautenfahrt* was concerned with the mystic destiny of mankind; a group of refugees, in a desperate search for God, find their souls through suffering and spiritual experience. Similarly, Wiechert's *Missa sine nomine* recounted the triumph of the Christian faith of three brothers over the postwar chaos. The poems of Gertrud von Le Fort, Hermann Hesse and Manfred Haussmann appeared in collected editions.

It was significant that many of Germany's leading writers expressed their ideas in essay form, notably Gottfried Benn in *Doppelleben* and other volumes and Richard Benz in *Lebensmächte und Bildungswelten meiner Jugend.* Friedrich Georg Jünger stressed the threat of the machine to the human spirit. Eugen Gottlob Winkler's letters, published in 1950, exhibited the aspirations and final despair of this gifted young essayist, who took his own life in 1938. A typically German and extremely thorough philosophical work was published by the existentialist Karl Jaspers under the title of *Die Wahrheit.*

Political reflections continued to appear, ranging from Gerhard Ritter's historical researches in *Europa und die deutsche Frage* and Erich Meissner's *Zwiespalt im Abendland* to the revelatory and, to Germans, somewhat painful apologiae of Paul Schmidt, Hitler's interpreter (*Statist auf politischer Bühne*), and of Viktor von Weizsäcker, former ambassador to the Vatican, whose insight into the political conditions of the Third Reich was truly remarkable. *Invasion 1944*, the sober report of Hans Speidel, Rommel's chief of staff, was a masterpiece of its kind. The writings of Carl Schmitt, the lawyer-politician, notably *Ex Captivitate Salus*, showed that his war-time experiences had not affected his intelligence or his writing powers. Among other distinguished memoirs were those of the archaeologist Ludwig Curtius, *Deutsche und antike Welt*, and of the architect Paul Bonatz. Ceram's *Götter, Gräber und Gelehrte*, the "romance" of archaeological excavation, enjoyed a startling success. (X.)

GERMANY. Country of central Europe, bounded N. by the North sea, Denmark and the Baltic sea, E. by Poland, S. by Czechoslovakia, Austria and Switzerland, and W. by



Police of the Soviet sector of Berlin forming a cordon in front of the Brandenburg gate during the 1950 May day demonstrations.

France, Luxembourg, Belgium and the Netherlands. According to the declaration signed in Berlin on June 5, 1945, the country was under the supreme authority of the four Allied powers—the United States, Great Britain, the U.S.S.R. and France—and divided into the four following zones together with Berlin (*q.v.*):

Zones	Area (sq.mi.)		Population (May 17, 1939, census)		Population (Oct. 29, 1946, census)
British	37,723	94,634	19,785,500	44,523,300	22,344,900
U.S.	41,506		14,257,600		17,174,400
French	15,405*		6,088,900		5,004,000*
Soviet	41,623		15,157,100		17,332,900
Berlin	344		4,321,500		3,179,200
	136,601†		59,610,600		65,035,400

* Excluding the Saar (area, 734 sq.mi.; pop., 874,400).

† Including some small German frontier areas which, as agreed upon under the six-power agreement of March 26, 1949, were taken over by Belgium, Luxembourg, the Netherlands and the Saar respectively (total area, 52·1 sq.mi.; total pop., about 13,500).

Before the *Anschluss* of Austria the area of Germany was 181,742 sq.mi. with a population (1939 census) of 69,317,000. The British, Soviet and U.S. zones contained larger populations than in 1939; by 1946 the zonal increases were: British zone 12·9%, Soviet 14·4%, U.S. 20·5%. The additional inhabitants were mainly Germans evacuated or transferred from Poland and Czechoslovakia. Only the population of the French zone was less (3·5%) than in 1938. Language (1946 est.): German with small admixtures of Lusatian (260,000 in Kottbus-Bautzen area), Polish (150,000, mainly in Westphalia) and Danish (17,000). Religion (1938 est.): Protestant 62·7%; Roman Catholic 32·5%; Jewish 0·7%; others 4·1%. Chief cities (first figure, 1939 census; second, 1946 census): Berlin (4,332,242; 3,179,200); Hamburg (1,711,877; 1,406,158); Munich (829,318; 738,018); Cologne (772,221; 489,812); Leipzig (707,365; 608,111); Essen (666,743; 520,592); Dresden (630,216; 463,032); Frankfurt-on-Main (553,464; 389,097); Düsseldorf (541,410; 421,506); Dortmund (542,261; 436,198); Hanover (470,950; 347,040).

During the year Germany remained partitioned into two states with a special provisional regime for Berlin.

Western Germany. Area, 94,634 sq.mi. Pop. (Sept. 13, 1950 census): 47,557,926 (incl. 25,259,619 women) which indicated an increase of 3,034,626 since Oct. 29, 1946. Capital: Bonn (pop., Dec. 1949 est., 110,000). President of the German Federal republic, Dr. Theodor Heuss; federal chancellor, Dr. Konrad Adenauer. Allied high commissioners: British, Sir Ivone Kirkpatrick (*q.v.*); French, André François-Poncet; U.S., John J. McCloy. Allied commanders in chief in Western Germany: British, Lieut. General Sir Charles F. Keightley; U.S., Lieut. General Clarence R. Huebner; French, Lieut. General A. Guillaume.

Eastern Germany. President of the German Democratic republic, Wilhelm Pieck; prime minister, Otto Grotewohl. Soviet Control commission: Army General Vasily Ivanovich Chuykov, chairman; Ivan Fedorovich Semichastnov, deputy chairman; Vladimir Semenovich Semenov, political adviser.

History. The Western German Federal republic and the Eastern German Democratic republic went their several ways during 1950. The former followed western democratic lines while the latter became much more closely bound to the Soviet system. The Federal republic had not yet obtained complete sovereignty but was rapidly developing towards that goal. This advance was registered in the three Western foreign ministers' conference in New York (Sept. 12-19). There it was decided: (1) to end by legislation the state of war with Germany; (2) to reinforce the Allied troops in Germany and to treat any attack against the Federal republic or on Berlin from any quarter as an attack on themselves; (3) to help in creating mobile police formations in Western German *Länder* (states); (4) to empower the federal government to set up a Ministry of Foreign Affairs and to enter into diplomatic relations with foreign countries "in all suitable cases"; (5) to revise the Occupation statute and the occupation laws of Berlin and to relax Allied controls

particularly in internal economic affairs; and (6) to revise the list of prohibited and restricted industries and in the meantime to allow cargo ships of any size to be built for export, and the steel limit of 11·1 million tons annually to be exceeded where this would facilitate the defence of the west.

Before agreement on the revision of the Occupation statute was reached, Chancellor Adenauer proposed (Nov. 24) that a security pact would be the proper basis for that *Gleichberechtigung* (equality of rights) which was an essential basis for German participation in the defence of western Europe. The Allied High commission decided to refer the matter to their governments (Dec. 1). Allied conditions for a revision of the Occupation statute, namely, recognition of former German debts and agreement by the Federal republic to a sharing of raw materials essential for defence, had to be approved by the Western German parliament.

Apart from French objections to German rearmament, Germans themselves were strongly divided on this issue. Kurt Schumacher, the Social Democratic leader, held that before an agreement on rearmament new federal elections should be held, and sufficient Allied forces should be maintained in Western Germany so that this country should not become " the first victim of a war between east and west." (In *Landtag* elections in Hesse and Württemberg-Baden, on Nov. 19, and in Bavaria, on Nov. 26, Socialists fought mainly on this issue of rearmament and had great gains.) Some Allied reinforcements arrived in western Berlin and Western Germany. On Nov. 24 the U.S. 7th army was reactivated as the foundation of the new U.S. strength in Western Germany, with headquarters at Stuttgart.

The Federal republic became a free and equal partner in many international organizations, notably in the consultative assembly of the Council of Europe at Strasbourg, where on Aug. 7 its 18 members (and three of the Saar) attended the session. The German request for an observer on the committee of ministers was however refused. The Federal republic had consular representatives in many world centres. It was co-operating in the Schuman plan and in the World Tariff conference at Torquay, England. The Federal republic was displeased that the Saar (*q.v.*) should have been invited to Strasbourg simultaneously with itself. German suspicions about France's intentions were not allayed by Robert Schuman's visit to Bonn (Jan. 15), even though he confirmed that the status of the Saar would be finally settled only in a peace treaty (Nov. 16).

The political unification of all Germany became again topical through the Soviet invitation to the U.S., Great Britain and France to join a four-power conference on this subject, based on the resolutions of the Prague conference of the foreign ministers of the U.S.S.R. and its European satellites (Oct 21-22). These conditions were in marked contrast with those which the high commissioners of the three western powers laid down on May 26 in their three identical letters, sent to General V. I. Chuykov stressing western democratic conceptions of individual freedom and independent justice.

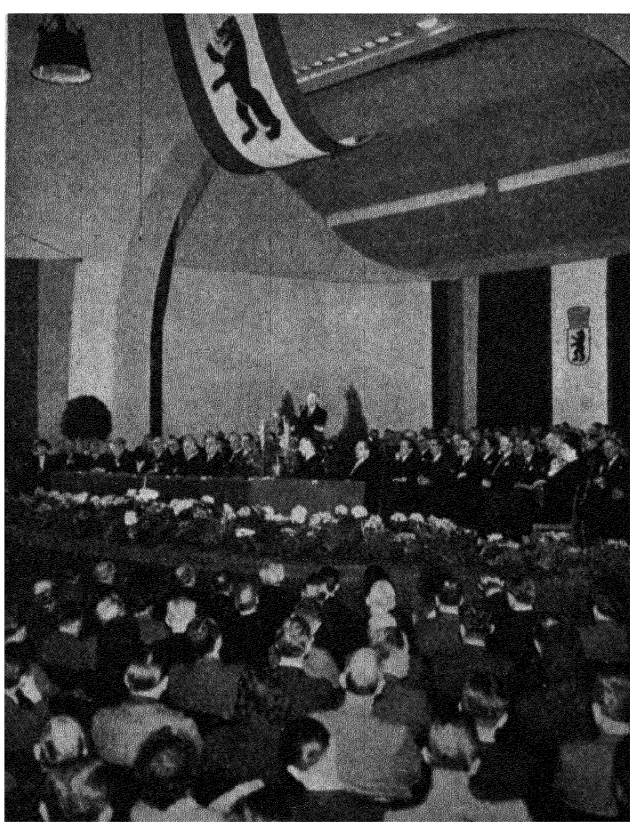
The German Democratic government meanwhile concluded its own arrangement with Poland regarding Germany's eastern frontier. The Oder-Neisse line was accepted as the final " peace frontier " between these countries (June 7). John J. McCloy, the U.S. high commissioner, declared on the same day that Germany's frontiers could be fixed only in a general peace treaty. The Bonn government repudiated the Warsaw agreement.

During the year the Eastern German government sent ambassadors to all European and Asiatic Soviet satellites. On July 22 it complained that U.S. aircraft were scattering Colorado beetles throughout Eastern Germany. Walter Ulbricht (*q.v.*), one of the deputy premiers and most powerful leader in the Democratic republic, announced on July 25 that a sea-going navy of 25 ships would be built between 1952 and 1955; also that, by agreement with Poland, Eastern Germany would have the use of the harbour of Szczecin (Stettin) until " a democratic Germany had at its disposal the ports of Hamburg and Lübeck."

German Federal Republic. A number of formerly important issues between the Allies and the German government faded into the background during the year. Dismantling was practically over. Disturbances marking the high point in German obstructionism occurred on March 6 at Watenstedt-Salzgitter, in Lower Saxony. Germans were faced with the problem of planning new industry there. Steel production, fixed by the Allies at a maximum of 11·1 million tons a year, reached that level in February, according to Ludwig Erhard, the federal minister of economics. Meanwhile the above-mentioned New York agreement allowed this limit to be raised under certain conditions. Steel production capacity was estimated at 14·5 million to 15 million tons and home needs at 13·5 million tons.

Decartellization continued. The Allied High commission directive of Sept. 22 ordered six of the largest iron and steel firms in the Ruhr to be liquidated as from Sept. 30. Negotiations regarding German proposals for the decentralization of the I.G. Farben (dye trust) were not completed.

On May 8 the Allied High commission promulgated a law for the preventing of German rearmament, to be effective from June 1. In September, however, the Allies sanctioned the creation of a mobile German police force, 30,000 strong, to deal especially with Communist sabotage and agitation. By the end of the year, however, the Federal republic had only agreed to a force of 10,000 following long-drawn-out negotiations between the federal government and the *Länder*, in which costs and the question of competence between the central and provincial authorities played a great part.



Konrad Adenauer speaking at a meeting in Berlin, April 1950. At the end of the meeting the audience sang the forbidden anthem " Deutschland über Alles."

The federal parliament continued to be led by the coalition government with Adenauer as chancellor. The only change in the cabinet came with the resignation, on Oct. 9, of Gustav Heinemann, federal minister of the interior. This followed differences with the chancellor regarding the latter's handling of the memorandum on rearmament to the High commission (Aug. 29). Robert Lehr, another Christian Democrat, was Heinemann's successor. The federal parliament, though differing considerably on social and economic issues, was united on foreign matters in so far as they concerned German demands for equal rights and the consequent abolition of the Allied control, especially in internal affairs.

Great economic progress was made during the year. From Sept. 1949 to Sept. 1950 exports increased by 33%, and 25 trade agreements were signed, 11 of them with the E.R.P. countries. Unemployment, which in February was 2 million, was reduced by November to 1,277,912. In the government's great building programme, 210,000 dwellings were completed by Sept. 30, and more than 1,400 bridges were repaired. Two million more Germans were in employment in 1950 than in 1938. Coal production steadily increased: record day output (Oct. 23) was 374,000 tons.

It was estimated that during the fiscal year 1950-51, Western Germany could export more than $2,000 million worth of goods. In the July-September quarter, the republic's only favourable trade balance was with countries behind the "iron curtain," exports to Eastern Europe amounting to $31·3 million and imports from that area to $30·7 million. The east-west agreement (Feb. 25), which was interrupted for some time because of differences over accounts and an alleged "creeping blockade" by Eastern Germany, was expected, by the end of the year, to be shortly resumed.

A crisis arose in the dollar situation, early in November. Western Germany used up in 3½ months credits allotted by the European Payments union for the whole year: at the end of September Western Germany's deficit was $175 million and all credit was spent. A special credit of $120 million was made available to meet its indebtedness to E.P.U. accounts and to adjust its balance of payments generally. This situation, according to a White Book published by the German minister for E.R.P. (Nov. 24), was due to three causes: the unexpected upswing in German economy, the price changes on the world markets and the movement of imports of dollar countries to other currency areas.

The federal budget for 1950-51 totalled Dm. 13,013 million and provided for continuation of food subsidies which should have ended by July 1. Two outstanding items in the budget were occupation costs (Dm. 4,598·4 million, or 36% of the total) and social services costs. Sir Ivone Kirkpatrick stated on July 17 that the British Control commission staff, which was 25,000 in 1947 had been reduced to 7,500 on Jan. 1, 1950, and would be 3,200 by Jan. 1, 1951. He also added that Great Britain had contributed £207 million towards Germany's economic rehabilitation.

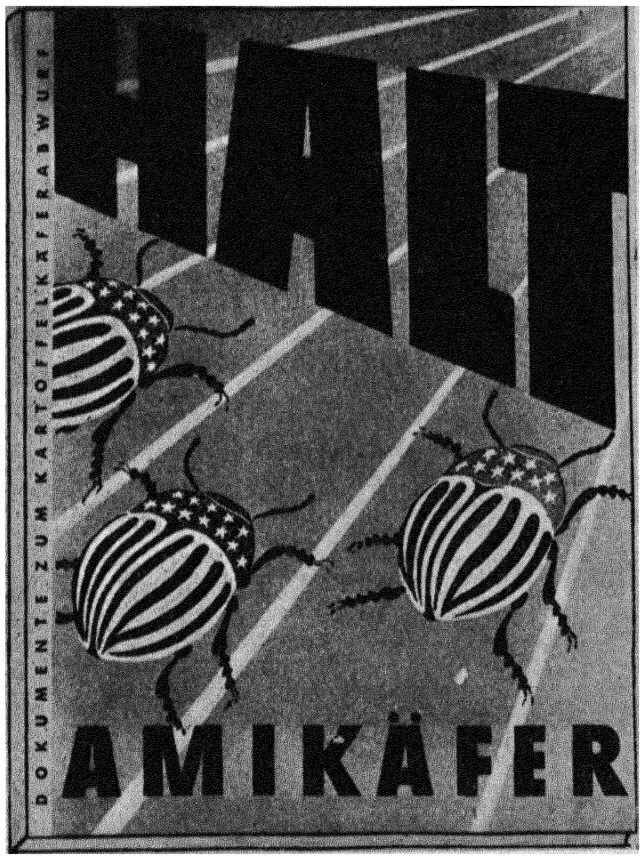
An important issue which was still unsettled and affected both politics and industry concerned the relations between the employers and the trade unions. This was the *Mitbestimmungsrecht* (the right of participation in the control of industry). It was discussed at a joint conference of the employers' associations and the trade unions at Hattenheim, near Frankfurt, in the spring. No agreement was reached. Differences on wage claims alienated employers and employees still more. At the trade union congress in September the employers were attacked as being incapable of creating a new social order in industry. The association of industrialists at Cologne in November was equally hostile towards the workers. A draft law on *Mitbestimmungsrecht* had been before the federal parliament for some months. It was, however, shelved because the government coalition parties were divided on this matter.

A meeting at Darmstadt (Oct. 30) between representatives of the Social Democratic party and those of the *Bekenntniskirche*, which was a powerful section of the Evangelical Protestant Church, seriously raised for many Protestants the problem of the attitude of their church towards political parties. This meeting, in which Kurt Schumacher and Dr. Martin Niemöller, bishop of Hesse, were the principal participants, revealed common agreement especially against the rearmament of Germany under existing conditions. Bishop Niemöller's political utterances were the main subject of discussion at a special session of the Evangelical Church council in Western Berlin (Nov. 17). A communiqué published afterwards recommended that church officers should follow a policy of restraint in dealing with political matters.

German Democratic Republic. The final change from Soviet military occupation to civilian rule came on June 7, when Major General A. G. Kotikov, commandant of the Soviet sector in Berlin, and the military governors of Brandenburg, Saxony and Thuringia were recalled to Moscow. But after the establishment of this republic (Oct. 11, 1949) political and economic developments were considerably speeded up to change it into a Volksdemokratie, a form of dictatorship of the proletariat with the S.E.D. (Sozialistische Einheitspartei Deutschlands or Socialist Unity party) as its dominant force. Through its *bloc* policy the S.E.D. rendered innocuous the only two bourgeois parties, the Christian Democratic union and the Liberal Democrats. Between Jan. 24 and Feb. 7, more than 150 members of these two parties (including three provincial ministers) fled to Western Berlin. Between Dec. 1, 1949, and May 31, 1950, more than 117,000 refugees from Eastern Germany sought asylum in the west.

The political purges removed all open opposition to the S.E.D., so that the elections of Oct. 15 showed a 99·4% vote (open, *not* secret ballot) for government candidates. Superficial uniformity was made all the easier through the activities of a new security police under the control of Wilhelm Zaisser, who had served in the International brigades in the Spanish civil war and was later trained in Moscow. The special task of this new organization was to fight "saboteurs and spies." It worked in close co-operation with the Volkspolizei which in April was estimated to be 150,000 strong (30,000 administrative police, 20,000 engaged in ordinary police duties, those in the 150 training schools for police officers and 50,000 alert troops or *Bereitschaften* (in battalion strength of about 2,000 each). They lived in barracks, had Soviet arms and were manned mainly by ex-army officers, who would later be replaced from the ranks of the F.D.J. (Freie Deutsche Jugend or Free German Youth). On May 23 the western powers, through their ambassadors in Moscow, protested to the Soviet government against this violation of the Potsdam agreement of Aug. 2, 1945.

To insure reliability within the ranks of the S.E.D. long-standing Communists who had been in exile in the west during the Hitler regime were removed from public life because assumed to be tainted with "Titoism." The appointment of Ulbricht as secretary general of the S.E.D. (July 25) made this trusted servant of the U.S.S.R. the chief influence in Eastern Germany and gave a clear indication of the extreme line of policy to be followed. Whereas the S.E.D. dictated policy at home, the so-called National front was used as a cover for all appeals to supporters of a united Germany—but along Communist lines. In the first congress of this organization held in eastern Berlin (Aug. 25), Pieck presented a 12-point programme of "national resistance" against Western Germany. This included the usual Communist demands for the abolition of the Occupation and Ruhr statutes, of armaments production and dismantling.



The cover of a pamphlet issued in Eastern Germany in 1950 as part of a propaganda campaign claiming that United States aircraft had dropped colorado beetles.

The new government, formed on Nov. 15 as the result of the election one month previously, retained Grotewohl as prime minister. In his statement of policy, he reaffirmed the government's close ties with the U.S.S.R. and their support for the Prague proposals as a basis for a unified Germany. He announced a purge of the S.E.D. and added that all members must undergo a political test to prove their devotion to the party; further, that no new members would be admitted until June 30, 1951.

Much enthusiasm was shown at the third S.E.D. congress (July 20-24) at the announcement of the success of the four-year production plan. But it was impossible to test the accuracy of these claims since no reliable statistics were available. An outstanding feature of economic development was the extension of the number of nationalized industries and the corresponding disappearance of private enterprises, despite the protection guaranteed to them in the constitution (article 22). Of 115 Soviet limited liability companies (Sowjet Aktien-Gesellschaften), 19 were handed back to the Germans, among them the famous Meissen china factory. But the majority, including fuel and chemical plants, were still in Soviet hands. Of two million workers in Eastern Germany, 300,000 worked in the S.A.G., 950,000 in German nationalized industries and only 750,000 in private businesses. Only 25% of production remained in the republic, the rest going to the U S.S.R. After dismantling only 10% of the former industrial plants remained.

Despite the constitutional guarantees for freedom of worship, a sharp fight against organized religion continued, especially for the control of youth. On April 25 Bishop Otto Dibelius of the Lutheran Church, protested to Grotewohl against the compulsory membership of the S.E.D. and the Free German Youth and against the attacks on religion in the state schools. But Grotewohl's speech at the S.E.D. congress showed that the Communists had no intention of abandoning their opposition. The sect of the Jehovah's Witnesses was banned, its funds confiscated and many of its leaders sentenced to long terms of imprisonment for alleged espionage. Communist efforts to establish a *Volkskirche* met with poor results: only 100 out of 6,000 pastors in the republic openly supported the idea.

In the cultural field much stricter supervision of publications, especially of books published in the west, was evident. Many university professors and higher school teachers were dismissed or escaped to the west while those remaining were continuously attacked for failure to support the regime and "pure Lenin-Stalin Marxism."

Germans arrested by the Russians between the end of hostilities in 1945 and Jan. 1950 were estimated at 185,000, according to a statement (Oct. 21) by Dr. Rainer Hildebrandt, head of the Group for Fighting against Inhumanity. Of these, 37,000 were sent to Siberia, 96,000 perished in camps, and 12,721 were released. Concentration camps still existed at Bautzen and Waldheim in Saxony; there was also a special prison in Brandenburg. (J. E. Wi.)

Education. *Western Germany.* Schools (May 1948): elementary 28,865, pupils 6,254,333, teachers 110,401; higher elementary (Bizone only) 620, pupils 175,946, teachers 5,845; secondary 1,429, pupils 600,235, teachers 26,934; universities 16, students 71,672, professors and lecturers 3,377. *Eastern Germany.* Universities 5, students (1948) 12,269, teaching staff 671. In addition there was the University of Berlin with, in 1948, 5,634 students and 157 professors and lecturers.

Agriculture. Tables I, II and III show respectively the production of main crops, the amount of livestock and the production of certain foodstuffs.

TABLE I. AGRICULTURAL PRODUCTION ('000 metric tons)
(W = Western Germany without the Saar; E = Eastern Germany)

		1934-38	1947	1948	1949	1950
Wheat	W	2,505*	1,229‡	1,953	2,471	2,614
	E	1,553*	483	999	926	815
Rye	W	3,081	2,023‡	2,727	3,310	3,021
	E	2,070	1,418	1,941	2,025	2,130†
Barley	W	1,699	701‡	855	1,213	1,473
	E	1,028	423	428	458	515
Oats	W	2,843	1,696‡	1,904	2,600	2,545
	E	1,587	893	809	1,087	1,140
Potatoes	W	19,977‡	14,415	23,547	20,875	—
	E	13,630	8,055	12,408	8,499	—

* Includes spelt. † Includes mixed grains. ‡ With the Saar.

TABLE II. LIVESTOCK ('000 head)

		Dec. 1938	Oct. 1946	Oct. 1948	Dec. 1949
Cattle*	W	12,201	11,229	10,643	10,846
	E	3,644	2,764	2,879	—
Pigs*	W	12,314	6,466	6,814	9,679
	E	5,689	1,941	2,616	—
Sheep*	W	1,987	3,014	3,288	2,012
	E	1,779			—
Goats	W	1,403	1,106	1,428	1,444
	E	679	899	1,398	—
Horses*	W	1,570	1,576	1,630	1,624
	E	810	642	665	—
Poultry*	W	55,539	27,023	25,549	44,067
	E	21,250	11,901	15,764	—

* Figures for Western Germany include the Saar.

TABLE III. FOODSTUFFS ('000 metric tons)

		1938	1947	1948	1949	1950*
Milk ('000 hl.)	W	148,050	85,090	86,420	113,160	133,000
	E	49,240	22,220	20,250	—	—
Butter	W	239	180	188	246	250
	E	85	—	55	64	—
Cheese	W	152	82	95	150	160
Meat	W	1,296†	—	498†	895†	1,100
Sugar (raw value)	W	1,286	363	612	614	—
	E		417	680	555	—

* Estimate for year based on first eight months. † Bizone only.

Industry. Industrial production in Western Germany continued to rise during the year, reaching in November the index number of 129 (1936 = 100) as against 88 in 1949. The prices of foodstuffs and the cost of living were stable, but there was a distinct rise in the prices of industrial raw materials. The number of persons employed in industry was in September 14,297,000, that is, 773,000 more than at the corresponding period of the previous year; in November there were still 1,316,000 unemployed, that is, 665,000 fewer than in February. Production

progress in basic industries is summarized in Table IV;1936 is given as a measure of comparison because the occupation powers considered this a year of neither boom nor depression.

TABLE IV. WESTERN GERMANY: INDUSTRIAL PRODUCTION*
('000 metric tons if not otherwise stated)

	1936	1946	1949	1950
Coal	116,964	53,946	103,236	108,654
Crude oil	445·2	649·5	841·2	1,081
Electricity (million kwh.)	24,588	23,820	35,700	40,800
Gas (million cu. metres)	14,196	3,167	7,788	8,868
Iron ore (25% metal cont.)	5,508	3,912	9,108	10,386
Pig iron	12,204	2,088	7,140	9,473
Steel ingots and castings	14,232	2,556	9,156	12,121
Copper	121·7	6·0	103·1	132
Lead	99·8	19·4	97·6	115
Zinc	96·0	14·9	86·9	119
Potash	2,400	2,614·8	7,033·8	—
Cement	9,071	2,592	8,460	11,193
Building bricks (million)	4,116	792†	3,540	4,374
Motor vehicles: cars	174,120	9,960	104,040	208,000
Motor vehicles: commercial	36,360	12,960	56,880	80,000
Cotton yarn	233·7	78·9‡	228	269
Wool yarn	41·5	27·8‡	64·8	80
Rayon filament yarn	21·9†	3·8†	45	46
Rayon staple fibre	22·3†	17·5†	83·8	110

* Excluding the Saar. † Bizone only. ‡ 1947.

An important fact was that steel production reached 12·1 million metric tons, surpassing the official limit set by the Allies by 1 million tons and the production of France by 2·9 million tons. It was believed that Western German steel production could easily be raised to 15 million tons a year.

A new five-year plan came into force in Eastern Germany on Jan. 1, 1951, and the controlled press claimed that the population of the Democratic republic would regain the prewar living standard by 1952, and that by 1955, when the plan would be completed, conditions would be better than before 1939. The Eastern German government also claimed that industrial production in the Soviet zone was already at the 1936 level, but it was difficult to reconcile this claim with the low standard of living prevailing in Eastern Germany. According to one reliable estimate, industrial production reached 85% of the 1936 level and total consumption was about two-thirds of the prewar level. In 1950 Eastern Germany produced 2·5 million metric tons of coal (the plan called for 3 million) and 600,000 tons of steel; it also produced over 100 million tons of lignite used as raw material for synthetic oil and rubber.

Foreign Trade. Western German exports in 1950 almost doubled in value in comparison with the previous year. As imports increased by a quarter, the trade balance remained adverse, though considerably reduced.

TABLE V. WESTERN GERMANY: EXTERNAL TRADE
(Million Deutsche Marks)

	1936*	1947*	1948	1949	1950
Imports	2,650	2,140	3,760	7,929	9,790
Exports	3,000	700	2,170	4,155	7,579

* Estimated.

The increase in exports was due not only to increased production and E.R.P. aid, but also to the world situation created by the rearmament programmes in the North Atlantic treaty countries.

Transport and Communications. Railways (1949, approximately): Western Germany 32,468 km., Eastern Germany 14,432 km. Railway traffic (Western Germany, monthly averages, 1949): passenger-km. 2,530 million; ton-km. 3,988 million; goods transported 18,102,000 metric tons. Roads (1949): Western Germany 128,000 km., Eastern Germany 54,900 km. Licensed motor vehicles (Western Germany, Dec. 1949): cars 358,000; commercial 485,400. Shipping (Sept. 1950; in brackets Jan. 1949): 500,000 (247,290). Cargo in Western German ports in external trade (monthly averages, '000 metric tons, 1949; June 1950 in brackets): loaded 442 (732), unloaded 1,293 (1,045). Telephones (Western Germany, Jan. 1949, including public call boxes): 1,974,036.

Finance and Banking. *Western Germany.* Budget (1950-51 est.): balanced at DM. 13,013·6 million, including occupation costs of DM. 4,598·4 million. National income (1949): DM. 64,500 million. Bank deposits (Sept. 1950): DM. 20,565 million. Currency circulation (Sept. 1950): DM. 7,923 million. Monetary unit: *Deutsche Mark*, created by the currency reform of June 20, 1948. Official exchange rates (Dec. 1950): £1 = DM. 11·76; $1 = DM. 4·20; "free" exchange rates (Frankfurt, Dec. 1950): £1 = DM. 13·00; $1 = DM. 5·30. *Eastern Germany.* Budget (1950 est.): balanced at DM. (East) 13,500 million, including occupation costs estimated at DM. (East) 6,100 million. Currency circulation (Dec. 1949): DM. (East) 4,145 million. Although theoretically at par with the western mark, the free exchange rate in Berlin was (Dec. 1950): DM. (West)1 = DM. (East) 5·60.

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GIBRALTAR. British fortress colony, situated on a narrow peninsula covering the western outlet of the Mediterranean sea and running S.W. from the southwest coast of Spain. Area: 2·12 sq.mi. (incl. recent reclamation). Pop., excl. members of armed services: (1931 census) 17,613; (mid-1950 est.) 25,000. Language: Spanish (50% also speak English). Religion: mainly Roman Catholic. Administration: governor; executive council, 4 *ex officio* and not more than 3 unofficial members; Legislative Council, 3 *ex officio*, 2 nominated and 5 elected members. Governor, Lieut.-General Sir Kenneth Anderson.

History. Protests against the new trades tax continued into 1950. On May 5 all shops and businesses closed for four hours and a half and a meeting of traders resolved to return all the assessment notices that had been issued. An appeal to King George VI later in the month was unsuccessful and the tax was subsequently paid. The colony's new Legislative Council was opened by the Duke of Edinburgh on Nov. 23. Towards the end of the year a fish-cannery was established with about £500,000 of local capital. The Colonial Development corporation was also putting into operation a factory-ship to be based on Gibraltar to catch, process and can shark, tuna and crawfish off the west coast of Africa. With the departure of the 1st Bn., The Royal Irish Fusiliers, and their replacement by a Royal Artillery unit in August the fortress was without infantry in its garrison for the first time since "The Rock" was captured in 1704. On the suggestion of the governor, the 14th-century King's chapel was being turned into a shrine for those regiments which took part in the campaign of 1704 or in the 14 subsequent sieges in its defence. A number of these regiments either laid up their colours in the chapel or presented commemorative gifts; they included the Grenadier Guards, the Royal Engineers, the Royal Regiment of Artillery and several regiments of the line.

Finance and Trade. Currency: pound sterling, with a local issue of notes. Budget (est. 1950): revenue £797,815; expenditure £1,104,830. Foreign trade: imports (1949) £4,358,746; exports, incl. re-exports, £408,749. (K. G. B.)

GIFFORD, WALTER SHERMAN, U.S. ambassador to Great Britain (b. Salem, Massachusetts, Jan. 10, 1885). After graduating from Harvard university, he joined the Western Electric company and from 1905 to 1908 held the dual post of assistant secretary and assistant treasurer. His work came to the attention of Theodore N. Vail who was then president of the Bell Telephone system, parent company of Western Electric, and Vail appointed Gifford chief statistician of the American Telephone and Telegraph company, of which the Bell system was a subsidiary. He held this post until 1916. In December of that year he was made director of the Council of National Defence in Washington, D.C., serving to advise congressional leaders on war production. At the end of World War I he returned to A. T. and T. as vice president, and in Jan. 1925 became its president. He served on President Herbert Hoover's Organization on Unemployment Relief in 1931-32, and on the Business Advisory Council for the Department of Commerce 1933-35. During World War II he became a member of the War Resources board (in 1939) and chairman of the Industry Advisory committee of the Board of War Communications (in 1941). On Sept. 27, 1950, President Harry S. Truman appointed him U.S. ambassador to Great Britain to replace

Lewis W. Douglas, who had resigned. He was confirmed in the post on Dec. 7, 1950.

GILBERT AND ELLICE ISLANDS: *see* PACIFIC ISLANDS, BRITISH.

GIRL GUIDES. The Girl Guide movement celebrated its 40th anniversary on "Guide Sunday," July 16, 1950, by special services of thanksgiving and of re-dedication for the World conference.

The biennial conference of the World Association of Girl Guides and Girl Scouts was held in England for the first time since 1930, at Oxford. Twenty-eight nations were represented. Haiti was granted full membership, and Germany "tenderfoot" membership of the association. Each delegation took back to their own country a scroll of friendship from the Guides of Great Britain. More than 300,000 guides shared in the passage of these messages of goodwill through every county in Great Britain.

Camping figures reached 84,761 in Great Britain, and over 2,500 members of the movement travelled abroad under guide auspices. A pilgrimage of 500 guides visited Rome.

The ranger branch in England organized a three-day rally in London in October. Performances of a "Cavalcade of Rangering" at the Albert hall included demonstrations of the different types of training for land, sea and air rangers. Ten thousand rangers assembled at the White City stadium on the last day of the rally for a drumhead service and march past, at which Princess Margaret, as sea ranger commodore, took the salute. (B. PL.)

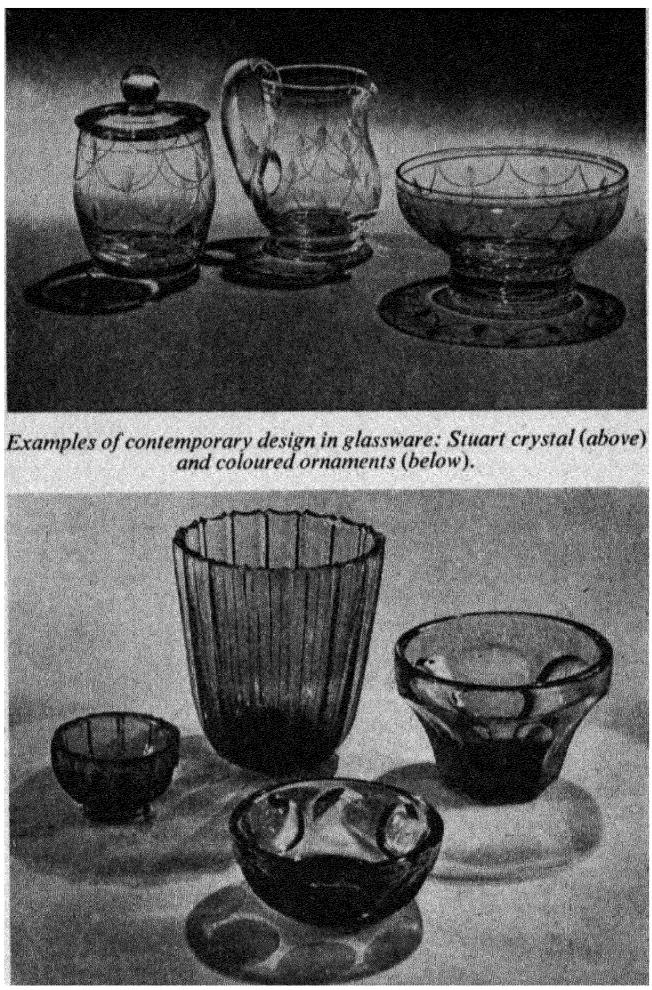
United States. On March 13, 1950, a congressional charter was conferred upon the Girl Scouts of the U.S. in recognition of 38 years of service to youth. More than 55 tons of schoolbags, made and filled by Girl Scouts for needy "Schoolmates Overseas," were distributed in 29 countries. The three senior leaders of the newly reorganized German Girl Scouts (western zones) visited the U.S.

Mrs. Paul Rittenhouse, Girl Scout national executive director since 1935, retired at the end of 1950. She was succeeded by Dorothy Stratton, a former university tutor and head of the SPARS (women in the U.S. Coast Guard) during World War II. Total membership on June 30, 1950, was 1,612,074. This number included 546,489 Brownie scouts (aged 7 to 10); 638,594 girl scouts (10 to 14); 56,911 senior girl scouts (14 to 18); 368,832 adult volunteers; and 1,248 local professional workers. (C. M. R.)

GLASS. There was a substantial world-wide increase in the demand for almost all types of glass and glassware during 1950. British manufacturers of domestic glassware, urged to increase their exports, felt much concern about their trade in the home market on account of the increasing licence-free imports of glassware from European countries as a result of the "liberalization" of trade in western Europe. Their fears were accentuated by the tendency to reduce tariffs and they awaited with some anxiety the outcome of the International Trade conference, whose sittings at Torquay began in the autumn of 1950 and would continue into the spring of 1951. British exports of domestic glassware increased by more than 25% over those of either of the two preceding years.

In the manufacture of glass bulbs an important development was the opening of a new factory at Harworth, Yorkshire, where a Corning ribbon machine capable of yielding 1·25 million bulbs every 24 hr. was set to work.

The demand for glass containers continued to increase; the average weekly figures of British production varied between 401,000 gross and 456,000 gross, a new record. In spite of this augmented production the industry was unable to satisfy the whole demand, chiefly because of labour shortage, the total labour complement in this section of the industry having been between 25,500 and 26,000 employees since 1948, while the demand had increased by nearly 15%. Exports of flat glass were well maintained and increased in value by about 7% over the figure for 1949.



Examples of contemporary design in glassware: Stuart crystal (above) and coloured ornaments (below).

In the glassmaking countries of Europe generally, output increased following the installation of new machinery and equipment in an effort to overtake the demand. In Germany the glass industry revived in a striking manner; many new glass works sprang up in the several zones, the total outnumbering those of the prewar industry. In the Russian zone there were some 63 glassworks, in the U.S. zone 58, and in the British zone 50. This remarkable German revival alarmed glass manufacturers in other European countries, who feared the dumping of German excess production. In the Scandinavian countries, Finland, Switzerland, Italy and France the use of the new method of electric melting increased.

In South Africa one of the three glass-container firms closed down its factory, but the other two continued to increase their plant by installing more machines from the U.S. Australian glass manufacturers continued their developments in India, Singapore and Java.

A British specialist team in packaging, including representatives of the glass industry, visited the U.S. in 1950 and made an interesting report on the competition of other packaging materials with glass; for example, tin cans for beer, cardboard cartons for milk and polyethylene bottles for cosmetics.

In scientific and technical development the work of the International Commission on Glass was carried forward.

Meetings were held during the year in Berne, Switzerland, and in Eindoven, Netherlands. (E. MGH.)

United States. In 1950, the U.S. glass industry enjoyed general prosperity. The total value of all glassware produced exceeded $1,000 million. The industry employed about 120,000 persons. Except for a brief strike in the hand-operated plants, no work stoppages occurred.

Polished plate glass production made the greatest gain. Automobiles used 75% of the plate glass output. Container production reached 110 million gross, their value being 40% of the 1950 total. Factories making tumblers, stemware and other items of household glassware by hand operation suffered from competition with European plants, and efforts were made to obtain additional tariff protection. Window glass was in high demand, and multiple-glass insulating windows (plate) increased in popularity. Television tubes were made in large numbers.

Numerous improvements in processes and products were achieved. Among these were: glass with a conducting film, perfected for the electrical heating of flat glass surfaces; improved devices for feeding batch glass and others for delivering gobs of hot glass to forming machines; new tube-drawing machines; the use of glass fibres in reinforcing tape and paper; and more effective application of coloured glass in windows and eye-protection goggles. (S. R. S.)

GLIDING. Sweden gained a new prominence during 1950 both by organizing the international competitions of the year and by taking from the U.S. an international record for single-seat gliders, when Laroy Maansson made an out-and-return flight of 243½ mi. (390 km.) in a Weihe on July 7; Billy Nilsson of Norway won the title of world champion. A communication from Hungary reported a speed of 24 m.p.h. (38·5 km.p.h.) over a 100-km. triangular course. British activity was less than in 1949, with some 1,400 new pilots and only 46 silver "C" badges as compared with 1,533 and 64; two gold "C" badges were awarded. France continued to make rapid progress in the training of pilots, with figures again roughly three times those of the United Kingdom. Two new British national records were made, both for height: on Aug. 24, Flight Lieutenant A. W. Bedford, in an Olympia from the R.A.F. station at Odiham, made a height record of 21,340 ft. and at the same time took from P. A. Wills the national record for gain of height above starting point, raising it from 15,247 ft. to 19,120 ft. A U.K. local record (for pilots of any nationality) was made on July 2 by J. A. C. Karran in an Olympia with a goal out-and-return flight of 141 mi. from Redhill to Netheravon and back.

(E. C. SD.)

United States. In the U.S., Harland Ross and George Diebert fitted out a Schweizer TG-3 glider with insulation and demand-type oxygen equipment. On Jan. 27, 1950, they soared the Sierra Nevada atmospheric wave to 36,000 ft. above sea level for an altitude gain above point of release of 24,300 ft.

The 17th National Soaring contest was held at Grand Prairie, Texas, from Aug. 2-13. Two of the gliders were completely new designs, the RJ5 by Richard Johnson and Harland Ross and the Prue 215 by Irving Prue. Johnson, flying the RJ5, earned the title of national champion and set a national goal record of 318 mi. on Aug. 12. Margaret Downsbrough established a new national goal and return flight of 68·9 mi. on Aug. 11. Les Arnold and Harry Perl, flying the powered glider "Hummingbird," made the longest goal and return flight of the contest, a 79-mi. flight.

(B. SK.)

GOA: *see* PORTUGUESE COLONIAL EMPIRE.

GOLD. Production. Output of gold in the chief producing countries increased during the greater part of 1950, stimulated doubtless by the higher price of the metal, though towards the end of the year higher production costs were making themselves felt. No figures were available for the U.S.S.R. (in the table an output of 7,000,000 fine oz. is assumed for 1949).

Canada. The recovery of gold production after the post-war recession continued in 1949, when output was 4,112,626 fine oz. During the first five months of 1950 output was 1,830,996 fine oz., equivalent to an annual rate of 4,394,400.

South Africa. Production remained fairly steady, with a rising tendency. Output was 11,704,758 fine oz. in 1949, and during the first nine months of 1950 production was at the rate of 11,739,020 fine oz. a year.

WORLD PRODUCTION OF GOLD
(thousands of fine ounces)

	1944	1945	1946	1947	1948	1949
United States	1,022	929	1,462	2,165	2,025	1,996
Canada	2,923	2,697	2,833	3,070	3,525	4,113
Mexico	509	419	421	465	368	350*
Central America	271	244	218	250	262	260
South America	1,354	1,259	1,202	1,100	935	900
India	188	168	132	175	180	161
Belgian Congo	364	341	331	308	300	300*
Gold Coast	534	475	587	560	672	675*
Southern Rhodesia	593	568	545	520	514	528
South Africa	12,280	12,225	11,927	11,200	11,584	11,705
Australia	657	657	824	938	890	893
World total*	26,400	26,100	27,500	29,800	29,600	30,000†

* Estimated. † Including an estimated 7,000,000 fine oz. for Russia.

United States. Output of gold had risen to 2,109,185 fine oz. in 1947 but declined to 2,014,257 in 1948 and to 1,996,435 in 1949. During the first eight months of 1950 there was a strong recovery to 1,503,083 fine oz., equivalent to an output of 2,254,623 a year.

Movements. The most striking development of 1950 was a reversal in the stream of gold, which for many years had been flowing powerfully in the direction of the United States. Under the combined influences of stockpiling at high prices, of Marshall aid and of military assistance to a number of countries an adverse balance of trade developed, which by the end of September had led to a reduction of about $1,100 million in the United States gold reserve.

A number of countries increased their gold reserves, among them South Africa, Switzerland and the Netherlands. But the most striking change was that recorded for the sterling area. Here the trend recorded in the last quarter of 1949 continued, so that by the end of Sept. 1950 the British gold and dollar reserves (Great Britain is the banker of the sterling area) had increased by $1,076 million over the figure recorded at the end of 1949.

During the early part of 1950 the premium on gold for industrial purposes largely disappeared. A number of countries were following the policy of South Africa and trying to obtain a higher price than the official one for some of the gold produced by them, with the result that distribution of gold into monetary uses on the one hand and industrial on the other was approaching the theoretical optimum. The outbreak of war in Korea brought the classical reaction, in the shape of an increased demand from the far east. Prices in the free market rose by over $1 to more than $38 an ounce. During the third quarter prices remained steady, and it appeared that demand was moving from the far east to the middle east and to certain European centres. In October buying was spread among centres as widely separated as Paris, Beirut and Hong Kong. Prices as high as $60 an ounce were reported from India, which country was apparently under the influence of its traditional hoarding trend. (W. H. JN.)

GOLD COAST. British colony and protectorate on the west coast of Africa bounded W., N. and E. by the French territory of Ivory Coast and Upper Volta and Togoland under United Kingdom Trusteeship respectively. Togoland under United Kingdom Trusteeship, the western part of the former German colony of Togoland, is administered with the Gold Coast.

	Area (sq.mi.)	Population (1931 census)	Population (1948 census)
Gold Coast . . .	78,650	2,869,854	4,118,450
Togoland	13,040	293,714	382,768

Pop.: African with Arab admixture; non-African (1948 census), Gold Coast 6,770, Togoland 51. Language: tribal dialects and Hausa. Religion: pagan, with Moslem and Christian minorities. Chief towns (pop. 1948 census): Accra (cap., 135,926 incl. 2,734 non-Africans); Kumasi (78,483); Sekondi-Takoradi (44,557). Administration: governor; executive council, 3 *ex officio* ministers and 6 other ministers responsible for departments and 2 ministers without portfolio, ministers other than the *ex officio* ministers being appointed from the Legislative Assembly by the governor after an affirmative resolution of the assembly; Legislative Assembly, 38 members elected on adult suffrage partly directly and partly through electoral colleges, 18 elected by the local councils of Ashanti, 19 elected from the Northern Territories council, 6 elected by the chambers of commerce and mines of whom only 2 have voting rights and the 3 *ex officio* ministers. Governor, Sir Charles Noble Arden-Clarke

History. Political activity in 1950 centred round preparations for the new constitution which came into force on Jan. 1, 1951, and for elections that were to be held in Jan. 1951. The general lines of the constitution followed closely the recommendations of the Coussey committee which had reported in 1949, as modified by the despatch of the secretary of state for the colonies published with the committee's report. In the words of Sir Charles Arden-Clarke, the governor, the effect was to place " the direct and immediate responsibility for the management of the affairs of the country on the shoulders of the people of the Gold Coast." Of the 84 members of the Assembly 75 would be Africans and the 8 ministers appointed from the Assembly would almost certainly at all times be Africans. The *ex officio* ministers were to have charge of the portfolios of defence, external affairs, civil service, finance and justice. The governor, although he retained reserve powers which could be exercised in grave emergency, would be bound in normal circumstances to act on the advice of the executive council which would decide matters within itself by majority vote. To secure, however, that the public service was entirely free from political influence, the appointment, transfer, promotion, dismissal and disciplinary control of civil servants was vested in the governor acting in his discretion and a public service commission was created.

In Sept. 1950, legislation conferred the franchise on taxpayers over 21 years of age in the municipalities and in the rural areas which elected members of the electoral colleges; it also established the secrecy of the ballot in these primary elections and the direct elections in the municipalities. On Nov. 1 a start was made to compile the first electoral register and at the same time the administration began an unusual and vigorous campaign to educate the electorate many of whom were illiterate and would mark their ballot papers by distinguishing the running colours of candidates. Fifteen units each with a mobile cinema van and maps, diagrams and quantities of literature in seven languages toured the constituencies. In each village, after opening with stirring tunes to attract the new electors, a gramophone recording explained how to register as a voter. The cinema and diagrams were brought into play by the government lecturer in charge of each unit to show how the new constitution would work and the part the elector had to play. At the end of December 663,069 persons, approximately 40% of the eligible population, had registered as electors.

Earlier in the year a campaign for " dominion status now " had been begun by the Convention People's party led by Kwame Nkrumah who announced on Jan. 8 that " positive action," defined as " national non-violent sit-down-at-home strikes and boycotts," would begin immediately. A state of emergency was proclaimed on Jan. 11 which lasted until March 18. Nkrumah and some of his supporters were gaoled for offences against the emergency regulations. In April, the Convention People's party won all seven seats in the Accra municipal elections in which only 20% of the electorate voted, in conditions admitted not to ensure secrecy. In August a meeting of representatives of the joint provincial councils of the colony, the Ashanti Confederacy council and the newly created Southern Togoland council urged an endeavour so to work the new constitution during a trial period that full responsible government might be achieved. The appointment in October of A. L. Adu, one of the first two Africans to become a district officer, to the new post of commissioner for Africanization was a further earnest of the government's determination to ensure that the country should as soon as possible provide its own civil service.

A new government corporation, the Gonja Development company, was formed to test the possibilities of improved agricultural methods in 30-ac. plots to be farmed by African settlers under its direction in the Northern Territories.

Togoland. The report of the first visiting mission of the United Nations was published in February. It agreed that "the only practical means of self-government for the peoples of British Togoland is to remain closely associated with the Gold Coast," and described the Anglo-French Standing Consultative commission for Togoland as " a most valuable institution which might be further developed." In June, the British and French governments communicated to the United Nations a proposal to increase the membership of the commission to include, besides officials, 17 representatives (15 elected) from British Togoland and 28 representatives (26 elected) from French Togoland in place of 2 African representatives from each territory. The functions of the enlarged commission would be to submit proposals on the practical means of satisfying the wishes of the inhabitants within the framework of French and British administration.

Finance and Trade. Currency: West African pound (£WA 1=£1 sterling). Budget (1949): revenue £16,206,000; expenditure £14,985,000. Foreign trade (1949): imports £39,733,939; exports £40,295,599. Principal exports: cocoa, gold, manganese, and timber.

See F. M. Bourret, *The Gold Coast*, London, 1949. (K. E. R.)

GOLF. A full and interesting year of golf in 1950 saw A. D. Locke (South Africa) retain his title of British open champion at Troon with a score of 276, which broke the previous record by 7 shots. Undoubtedly the golfer of the year, he won several of the succession of professional tournaments, headed the averages and in a short, almost casual, excursion to the U.S. finished with three 3s and a 4 to tie for, and later win on the replay, the lucrative Tam o' Shanter tournament at Chicago.

The open championship developed into a duel between R. de Vicenzo (Argentine), Locke and Dai Rees (South Herts.) who, level at 218, started their last round in that order. All three went out in 33. On the longer and more difficult homeward half Vicenzo took 37, Locke 35, and Rees, to whom the last 9 proved troublesome throughout, 39. Vicenzo at the short 13th, acting on the letter of the new rule, as he was entitled to do, declared his ball unplayable on finding it " plugged " in a bunker and, with a 2 with his second ball, secured a 3. After consulting with various golfing unions, St. Andrews decided not to change this admittedly

unsatisfactory rule till after the full trial period of two years.

Amateur champion for the second time in two years, and first amateur in the open championship with a final 66, was Frank Stranahan (U.S.) who beat Richard Chapman (U.S.) by 8 and 6 in the final at St. Andrews. Their 3 hr. 40 min. for the first 18 on a clear course aroused comment, as did the slow play in general. The field was strengthened by the presence of several of the leading American golfers, including W. P. Turnesa, J. B. McHale Jr., W. C. Campbell and W. L. ("Dynamite") Goodloe. The English championship was won at Deal by John Langley who, after being three down, beat Ian Patey on the last green. As a boy of 17 he had been runner-up on the same course in 1936. For the first time all three principal titles went abroad in the same year, the hat-trick being completed when the Vicomtesse de Saint Sauveur, daughter of that illustrious French golfer, André Vagliano, beat Mrs. G. Valentine by 3 and 2 in the women's final at Newcastle, Co. Down. In Britain the most successful woman golfer was Mrs. Gee, who won the English title at Sheringham and, in partnership with N. Sutton, the new Penfold professionals-and-women foursomes.

In the Curtis cup match at Buffalo, New York, the British team, outdriven and altogether outplayed on an exceptionally long and sodden course were overwhelmed by $7\frac{1}{2}$–$1\frac{1}{2}$, Mrs. F. Stephens and Miss E. Price winning their foursome and Miss Stephens halving her single. Later the team played in the U.S. women's championship at Atlanta, Georgia, where Miss P. Garvey reached the last eight. Apart from Locke, the most successful overseas player was Ossie Pickworth from Australia. Second in his first tournament in Britain, he tied for the *Daily Mail* event, losing on the play-off, and capped his visit with a fine win in the Irish open. Among British professionals Rees had an outstanding season, winning for the second year in succession the match-play championship, in which he beat in the final Frank Jowle (Sheffield), who in turn had beaten Henry Cotton. This was Rees' fourth win and he thus equalled the record of James Braid, who died on Nov. 27 (*see* OBITUARIES). (H. L.)

United States. The sensational comeback of Ben Hogan in the national open tournament, the surprising marathon triumph of Sam Urzetta in the U.S. amateur championship, and increased attendance at, and membership in tourneys conducted by the U.S. Golf association were the highlights of 1950 golf.

Hogan, winner of the U.S open in 1948 and victim of a nearly fatal motor-bus collision in Feb. 1949, began his comeback by tying Sam Snead for the Los Angeles open crown in Jan. 1950. Hogan then rested until the U.S. open, played in June over Philadelphia's Merion club course. Tied with Lloyd Mangrum and George Fazio after the regulation 72 holes (each had 287), the little Texan shot a 69 in the play-off to win by 4 strokes. Lee Mackey, Jr., an unemployed Birmingham, Alabama, professional, set a new single round record of 64 in the opening 18. Urzetta, 24-year-old East Rochester, New York, basketball star, who was playing in his third national amateur, won the championship at Minneapolis, with a stirring 39-hole victory over the heavy favourite, Frank Stranahan, of Toledo, Ohio.

The women's national title was captured by Beverly Hanson, of Fargo, North Dakota, a perennial contender since her junior days, who defeated Mae Murray, of Rutland, Vermont, 6 and 4. In the early international series of the year 1950, the U.S. women's Curtis cup team retained the trophy by vanquishing a visiting team from Britain, $7\frac{1}{2}$ to $1\frac{1}{2}$, at Buffalo, New York.

Other winners of important championships during 1950 included Stanley Bielat, Yonkers, New York, national public links; Mason Rudolph, Clarksville, Tennessee, U.S.G.A. boys' junior; Patricia Lesser, Seattle, Washington, U.S.G.A. girls' junior; and Fred Wampler, Purdue university, Lafayette, Indiana, national inter-collegiate. Sam Snead of White Sulphur Springs, West Virginia, led all professional money winners for the 1950 season with earnings of more than $33,000, while the $17,000 plus won by Mildred (Babe) Didrickson Zaharias of Chicago, Illinois, outdistanced all other women professionals. (C. BT.)

GÓMEZ CASTRO, LAUREANO. Colombian statesman (b. Bogotá, Feb. 20, 1889), was educated at the Colegio de San Bartolomé and the National university, Bogotá. From the latter he received an engineering degree. From 1911 to 1918 and again from 1921 to 1923 he served as a national deputy. In 1931, after serving as minister to Argentina (1924) and to Germany (1930) and as minister of public works (1925-26), he was elected a senator. From 1930 he was regarded as the leader of the Conservative party.

During World War II his newspaper, *El Siglo*, reputedly attracted Falangist support to him by its friendly attitude towards General Franco of Spain. Gómez was credited with engineering the choice of Mariano Ospina Pérez as Conservative candidate for the presidency, which the latter won in 1946. In 1948 Pérez appointed Gómez foreign minister. As such Gómez presided in March and April 1948 over the ninth International Conference of American States at Bogotá, which was interrupted by rioting following the assassination of the Liberal leader, Jorge Eliécer Gaitán. The day after the assassination, Gómez resigned and went abroad. He returned to Colombia from Spain after being nominated Conservative candidate for the presidency. The election of 1949 was held under conditions of martial law and the Liberals boycotted it. Gómez was elected, and was inaugurated on Aug. 7, 1950, for a four-year term.

GOVERNMENT DEPARTMENTS. The following were the chief officers of the more important public departments of the United Kingdom on Dec. 31, 1950.

Admiralty, Board of	
First Lord	Viscount Hall
Parliamentary and Financial Secretary	L. J. Callaghan
Permanent Secretary	Sir John Lang
Agriculture and Fisheries, Ministry of	
Minister	Tom Williams
Parliamentary Secretaries	Earl of Listowel
	George Brown
Permanent Secretary	Sir Donald Vandepeer
Air Ministry	
Secretary of State	Arthur Henderson
Parliamentary Under Secretary	Aidan Crawley
Permanent Under Secretary	Sir James Barnes
Cabinet Office	
Secretary to the Cabinet	Sir Norman Brook
Civil Aviation, Ministry of	
Minister	Lord Pakenham
Parliamentary Secretary	F. Beswick
Permanent Secretary	Sir Arnold Overton
Civil Service Commission	
First Commissioner	Sir Percival Waterfield
Colonial Office	
Secretary of State	James Griffiths
Minister of State	J. Dugdale
Parliamentary Under Secretary	T. F. Cook
Permanent Under Secretary	Sir Thomas Lloyd
Commonwealth Relations Office	
Secretary of State	P. C. Gordon-Walker
Parliamentary Under Secretary	Lord Ogmore
Permanent Under Secretary	Sir Percivale Liesching
Customs and Excise, Board of	
Chairman	Sir William Croft
Defence, Ministry of	
Minister	Emanuel Shinwell
Permanent Secretary	Sir Harold Parker
Development Commission	
Chairman	Countess of Albermarle

Duchy of Lancaster, Office of the
Chancellor . . . . . Viscount Alexander of Hillsborough

Education, Ministry of
Minister . . . . . George Tomlinson
Parliamentary Secretary . . D. R. Hardman
Permanent Secretary . . . Sir John Maud

Exchequer and Audit Department
Comptroller and Auditor General Sir Frank Tribe

Food, Ministry of
Minister . . . . . *Maurice Webb
Parliamentary Secretary . . F. T. Willey
Permanent Secretary . . . Sir Frank Lee

Foreign Office
Secretary of State . . . . *Ernest Bevin
Minister of State . . . Kenneth Younger
Parliamentary Under Secretaries . Lord Henderson
Ernest Davies
Permanent Under Secretary . Sir William Strang

Forestry Commission
Chairman . . . . . Lord Robinson

Fuel and Power, Ministry of
Minister . . . . . P. J. Noel-Baker
Parliamentary Secretary . . Alfred Robens
Secretary . . . . . Sir Donald Fergusson

General Registry Office
Registrar General . . . George North

Health, Ministry of
Minister . . . . . Aneurin Bevan
Parliamentary Secretary . . A. Blenkinsop
Secretary . . . . . Sir William Douglas

Health, Welsh Board of
Chairman . . . . . G. C. H. Crawshay

Home Office
Secretary of State . . . James Chuter Ede
Parliamentary Under Secretary . Geoffrey de Freitas
Permanent Under Secretary . Sir Frank Newsam

Information, Central Office of
Director General . . . Sir Robert Fraser

Inland Revenue, Board of
Chairman . . . . . Sir Eric St. John Bamford

Labour and National Service, Ministry of
Minister . . . . . G. A. Isaacs
Parliamentary Secretary . . F. Lee
Permanent Secretary . . . Sir Godfrey Ince

Law Officers' Department
Attorney General . . . Sir Hartley Shawcross
Solicitor General . . . Sir Frank Soskice

Lord Advocate's Department
Lord Advocate . . . John Wheatley
Solicitor General . . . Douglas Johnston

Lord High Chancellor's Department
Lord High Chancellor . . Viscount Jowitt
Permanent Secretary . . . Sir Albert Napier

Lord Privy Seal
Lord Privy Seal . . . Viscount Addison

National Debt Office
Comptroller General . . . G. H. S. Pinsent

National Insurance, Ministry of
Minister . . . . . *Edith Summerskill
Parliamentary Secretary . . H. B. Taylor
Permanent Secretary . . . Sir Henry Hancock

Paymaster General
Paymaster General . . . Lord Macdonald of Gwaenysgor

Pensions, Ministry of
Minister . . . . . H. A. Marquand
Parliamentary Secretary . . C. J. Simmons
Permanent Secretary . . . Sir Arton Wilson

Post Office
Postmaster General . . . Ness Edwards
Assistant Postmaster General . C. R. Hobson
Director General . . . Sir Alexander Little

Prison Commission
Chairman . . . . . L. W. Fox

Privy Council Office
Lord President . . . . Herbert Morrison
Clerk . . . . . Sir Eric Leadbitter

Public Prosecutions, Department of the Director of
Director . . . . . Sir Theobald Mathew

Public Record Office
Deputy Keeper . . . . Sir Hilary Jenkinson

Royal Mint
Deputy Master and Comptroller . L. L. H. Thompson

Scientific and Industrial Research, Department of
Secretary . . . . . Sir Ben Lockspeiser

Scottish Office
Secretary of State . . . Hector McNeil
Parliamentary Under Secretaries . T. Fraser
Margaret Herbison
Permanent Under Secretary . Sir David Milne

Stationery Office
Controller. . . . . H. G. G. Welch

Supply, Ministry of
Minister . . . . . G. R. Strauss
Parliamentary Secretary . . J. Freeman
Permanent Secretary . . . Sir Archibald Rowlands

Town and Country Planning, Ministry of
Minister . . . . . Hugh Dalton
Parliamentary Secretary . . G. S. Lindgren
Permanent Secretary . . . Sir Thomas Sheepshanks

Trade, Board of
President . . . . . J. H. Wilson
Secretary for Overseas Trade . A. G. Bottomley
Parliamentary Secretary . . Hervey Rhodes
Permanent Secretary . . . Sir John H. Woods

Transport, Ministry of
Minister . . . . . A. Barnes
Parliamentary Secretary . . Lord Lucas of Chilworth
Permanent Secretary . . . Sir Gilmour Jenkins

Treasury
Prime Minister and First Lord . *Clement Attlee
Chancellor of the Exchequer . *H. T. N. Gaitskell
Parliamentary Secretary . . William Whiteley
Financial Secretary . . . Douglas Jay
Economic Secretary . . . John Edwards
Permanent Secretary . . . Sir Edward Bridges

War Office
Secretary of State . . . E. J. St. L. Strachey
Under Secretary and Financial Secretary . . . . . Michael Stewart
Permanent Under Secretary . Sir George Turner

Works, Minister of
Minister . . . . . Richard Stokes
Parliamentary Secretary . . Lord Morrison
Permanent Secretary . . . Sir Harold Emmerson

* *See* separate article.

GRAIN CROPS. The area sown to rye for the 1949-50 season was reduced in Europe, especially in Czechoslovakia, France and Poland, where wheat took its place; but was increased in the U.S.A. under the operation of the acreage-control programme. Yields per hectare in Europe tended to be somewhat lower than in 1949, except in Spain and Portugal. Good crops were obtained in Canada and the U.S.A.; and the Turkish crop was well above the poor one of the preceding year.

There were few marked differences between the areas sown to oats in 1949-50 and those in the preceding year. More oats were sown, however, in both Western and Eastern Germany, in Canada and especially in the U.S.A., where oats replaced wheat in many places. Special interest in the improvement of the oat crop continued to be displayed by the more northern countries such as Finland, where new strong strawed varieties suitable for northern latitudes were introduced.

More barley was sown in 1949-50 than in the previous year and, except in Pakistan, where weather was unfavourable, the crop usually did well. Particularly large increases in the barley average took place in Poland and, to a lesser extent proportionally, in Canada and the U.S.A. Barley

TABLE I. ESTIMATED AREA AND PRODUCTION OF MAIZE

	Area ('000 ha.)		Production ('000 m. tons)	
	1949	1950	1949	1950
Europe (excluding U.S.S.R.)	10,600	10,600	15,300	13,100
North and Central America	40,500	39,100	90,200	84,100
South America	7,200	—	9,100	—
China (22 provinces)	5,000	—	6,500	—
India	3,467	—	2,299	—
Pakistan	406	—	430	—
Indonesia (Java and Madura)	2,250	—	1,850	—
Philippines	932	903	665	705
Turkey	597	501	725	626
Africa	9,700	—	7,400	—

SOURCE: Figures in Tables I, II and III are taken from the F.A.O. *Monthly Bulletin.*

TABLE II. ESTIMATED AREA AND PRODUCTION OF SMALL GRAIN CEREALS, EXCLUDING WHEAT

	Rye				Oats				Barley			
	Area ('000 ha.)		Production ('000 m. tons)		Area ('000 ha.)		Production ('000 m. tons)		Area ('000 ha.)		Production ('000 m. tons)	
	1949	1950	1949	1950	1949	1950	1949	1950	1949	1950	1949	1950
France	522	498	650	591	2,436	2,298	3,225	3,216	896	956	1,431	1,572
Germany (all zones)	2,714	2,740	5,361	5,181	1,794	1,869	3,695	3,693	748	898	1 674	1,991
Great Britain	26	29	55	57	1,316	1,257	3,043	2,595	834	720	2,163	1,621
Other Europe (excl. U.S.S.R.)	9,300	8,800	12,300	11,400	7,500	7,400	10,400	9,900	6,100	6,400	8,600	8,300
United States	630	749	475	572	16,414	17,306	19,202	21,540	3,998	4,546	5,184	6,531
Canada	478	473	254	339	4,609	4,684	4,903	6,482	2,435	2,681	2,622	3,730
Argentina	400	400	240	—	516	—	540	—	393	—	395	—
China (22 provinces)	—	—	—	—	940	—	730	—	6,200	—	6,600	—
Japan	6	6	7	9	76	86	87	135	998	1,017	1,998	1,958
India	—	—	—	—	—	—	—	—	3,137	3,092	2,248	2,233
Pakistan	—	—	—	—	—	—	—	—	247	227	182	157
Turkey	423	487	274	530	294	282	235	318	1,749	1,840	1,247	2,021
French North Africa	5	—	3	—	252	260	206	212	3,568	3,676	2,634	2,062
Australia and New Zealand	26	—	12	—	730	740	540	—	450	450	500	—

production in Turkey recovered from the bad crop year of 1949. New improved varieties greatly increased yields in Greece. (*See* Table II.)

The area of the 1949-50 maize crop was reduced in the U.S.A., the principal maize-producing country, in accordance with the acreage-control programme. Serious failures in the maize crops of Argentina and Yugoslavia were caused by drought. Great interest in hybrid maize continued to be shown in many European countries, especially Italy, Spain and Portugal. In the U.S.S.R. there was much discussion on the merits and demerits of hybrid maize production, which is regarded there as theoretically unsound. The cost of hybrid seed production has induced many agriculturalists to investigate other methods of improvement, especially the production of synthetic varieties. It became clear, too, that maize hybrids introduced into other countries from the U.S.A. were often less well adapted to their new environment than types locally produced.

The repeated failure of maize crops as a result of drought focused attention on the potentialities of the drought-resisting sorghums and millets. An increased acreage was sown to sorghum in the U.S.A. It was shown that high-yielding hybrid sorghums and millets may be obtained produced in a similar way to hybrid maize.

TABLE III. ESTIMATED AREA AND PRODUCTION OF RICE

	Area ('000 ha.)		Production ('000 m. tons)	
	1949	1950	1949	1950
Europe (excluding U.S.S.R.)	250	290	1,040	1,170
North and Central America	1,120	1,040	2,330	2,300
South America	2,330	—	3,830	—
Burma	3,270	—	4,076	4,080
China	18,500	19,000	44,500	50,000
Japan	3,150	3,000	12,224	11,700
India	29,606	29,200	34,519	—
Pakistan	8,811	9,100	12,403	12,900
Thailand	4,800	—	6,000	—
Indonesia	—	—	9,866	—
Indo-China	4,500	—	4,600	—
Philippines	2,180	2,184	2,596	2,654

The rice crop in 1950 was generally a good one, especially in China, Japan, Korea and Malaya. Production of rice increased also in Central and South America. Some damage was done to the Indian crop by floods. (*See* Table III.) (*See* also WHEAT.) (R. H. RI.)

GREAT BRITAIN AND NORTHERN IRELAND, UNITED KINGDOM OF. Independent kingdom in northwestern Europe, comprising the main island of Great Britain, with numerous smaller islands off the English and Scottish coasts, and the six northeastern counties of Ireland. It is a constitutional monarchy, with a king and parliament of two houses, the House of Lords consisting of 3 peers of the blood royal, 795 hereditary peers (21 dukes, 27 marquesses, 134 earls, 93 viscounts and 520 barons), 26 spiritual peers (2 archbishops and 24 bishops), 16 Scottish representative peers, a number of Irish representative peers (in 1950, 6; vacancies no longer filled) and 8 life peers who have held high judicial office; and the House of Commons, numbering 625 members, elected by universal suffrage. The table below shows areas and populations of the component parts of the United Kingdom:

	Area (in sq.mi.)	Population (June 30, 1950, est.)
England, together with Channel Islands (*q.v.*) and the Isle of Man (*q.v.*)	50,327	43,400,000*
Wales, (*q.v.*) including Monmouthshire	8,016	
Scotland (*q.v.*)	30,411	5,148,000
Great Britain	88,753	48,548,000
Northern Ireland (*q.v.*)	5,451	1,371,000
United Kingdom	94,205	49,919,000

* Wales: pop. (1949 est.) 2,591,000.

Language: English is almost universally spoken, but in Wales (according to the 1931 census) 3% of the population spoke Welsh only and 31% spoke both languages; in Scotland 0·15% spoke Gaelic only and 2·7% spoke both languages; in the Isle of Man 528 spoke English and Manx. Religion: Church of England (nominal membership 15 million, effective 5·5 million); Roman Catholic church (England, Wales, Scotland and Northern Ireland: *c.* 3·5 million); Presbyterian established church in Scotland (1·6 million in 1949); Church in Wales (est., 250,000); Methodists (1·5 million in 1949); Jews (*c.* 400,000).

Capital, London (*q.v.*) (pop., est. Dec. 31, 1949): city and metropolitan police districts 8,436,140; city and metropolitan boroughs only 3,410,720. Chief towns (est. Dec. 31, 1949, if not otherwise stated): Birmingham 1,114,250; Glasgow 1,089,400; Liverpool 805,050; Manchester 704,430; Sheffield 514,350; Leeds 508,340; Edinburgh 487,700; Belfast (Jan. 1, 1939) 443,500; Bristol 442,220; Nottingham 304,060; Hull 297,920; Newcastle-on-Tyne 294,980; Leicester 286,200. King, George VI (*q.v.*); prime minister and first lord of the treasury, Clement R. Attlee (*q.v.*); secretary of state for foreign affairs, Ernest Bevin (*q.v.*).

History. *Political.* February filled the political dykes. All the water that flowed through Westminster during 1950 had been gathered during the general election campaign, and it did not bring great fertility to the land. It was natural that the Labour party, having invited the electorate to "face the future" in 1945, should be content this time to turn round and look at the past, recent and not so recent. Its candidates compiled inventories of what had been accomplished since 1945 and then compared this record of prodigious legislation with that of peacetime Tory governments in the years between the wars. They attributed the continuance of full employment to their own economic planning, and in every Socialist brief case there was a copy of the Health Service act. Not so much was heard about plans for the future, although the official

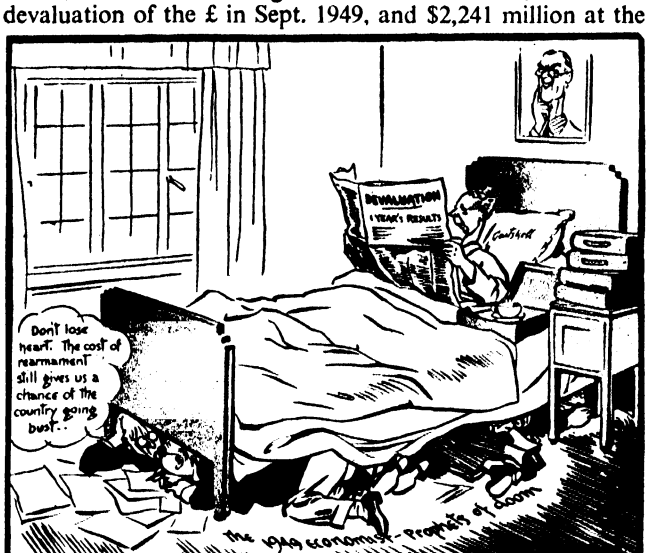


The two chancellors of the exchequer in 1950. Left, Sir Stafford Cripps, who resigned on Oct. 20 because of ill-health, and Hugh Gaitskell, right, who succeeded him.

party programme did mention the public ownership of beet sugar manufacturing and sugar refining and also of the cement industry. The chemical industry would be "carefully examined," with a transfer to public ownership in the offing if the examination satisfied the party that nothing short of that would do. The Conservatives, for their part, also contemplated the past—and with much less satisfaction. Recalling the fuel crisis over which Emanuel Shinwell had presided and the leadership of Hugh Dalton in economic stress and strain, they asked for the justification of Socialist plans and planners. Recounting the exploits of John Strachey in the African interior, they demanded to know if the groundnuts scheme inspired confidence in Socialist business acumen. Recapitulating the money troubles of the nationalized industries, they questioned the wisdom of further nationalization. The Liberal party, meanwhile, was preaching the evils of a class war, enlarging upon the danger in a parliament tightly controlled by two tightly controlled political parties, each handicapped by the prejudices of a particular group or class. It looked at the Conservative and Socialist past and found neither encouraging for the future. In detail, it opposed conscription in peacetime as wasteful and inefficient, once more raised a plea for proportional representation, paid more attention than either of the other two parties to the place of women in the community and developed its ideas on ownership for all, with co-ownership and profit sharing in industry as an incentive to greater effort. In general, the election proceeded mildly and with decorum. So decorous was it, indeed, that it began to get dull. In the tail lay the sting. Results declared on the night of the poll sent Transport House to bed with pleasant dreams of a return to undisputed power. But in Tory hearts hope came with the morning and with the mounting number of Conservative successes announced during the day. The net result of it all, after hours of suspense and excitement, was that the Labour party had won 315 seats, the Conservatives and their friends of various nomenclatures had taken 298, and all other parties, including the Liberals, had suffered either total or near extinction. Not for a century had the house been so evenly divided. (*See* also ELECTIONS.)

How long the new Labour government would or could remain in office was a nice point. Life was to be short and not so sweet—or so it seemed. When the new house met it was promised only a limited programme of legislation—a uniform code for regulating the breaking up of streets by public utility undertakings, alterations in the law relating to midwives, and other tremendous trifles—yet somehow the government kept on keeping on. Surrounded by prophecies of its imminent demise it grew in strength—not spectacularly but steadily enough. By September, the government's self-confidence had increased to such an extent that it announced its intention to proceed with the nationalization of iron and steel, although the moment could have been delayed, and it made known the membership of the new Iron and Steel corporation. Vesting day was fixed as Feb. 15, 1951. For the opposition, this was a deplorable return to party politics when party politics were least relevant to the situation (the Korean war had been in progress since June). Officially, the government was doing no more than implementing an act of parliament. Unofficially, it was quelling the impatience of its restless extremists, champing at the bit and longing for another appeal to the country. The more experienced campaigners preferred to wait and see. After repairing to Beatrice Webb house in May for spiritual refreshment and intellectual guidance the leaders of the Labour movement still gave an impression of uncertainty about their future course. The annual party conference, despite the advertisements of unity which issued from it, did not weaken this impression. Nor did the King's speech at the opening of the new session in October, when the government proposed the nationalization of the beet sugar industry (not sugar refining) and gave notice that it would seek authority to make permanent "powers to regulate production, distribution and consumption and to control prices." This could mean much or it could mean little, according to its interpretation. Settled in their splendid new chamber, which had been built on the bomb-ravaged site of the old house, the Commons eyed the government with emotions ranging from friendly curiosity to dark suspicion. (*See* also POLITICAL PARTIES, BRITISH.)

Finance and Economics. Preoccupation with the dollar gap became a more pleasant pursuit as the gap yawned much less wide. A White Paper published on Oct. 18 recorded that during the first half of 1950 the United Kingdom balance of payments with all countries showed a surplus of £52 million, the largest in any half-year since the outbreak of World War II. By one of those ironies which invite melancholy reflection there came hard on the heels of these glad tidings the news of the resignation of the chancellor of the exchequer. Sir Stafford Cripps (*q.v.*), a sick man, was to take his leave of the Treasury at the very moment when his policies there were beginning to bear fruit. In a relentless effort to repair the economic weaknesses of postwar Great Britain his own strength had been exhausted. By the end of the third quarter of 1950 the gold and dollar reserves of the sterling area stood at $2,756 million, as against $1,340 million just before devaluation of the £ in Sept. 1949, and $2,241 million at the

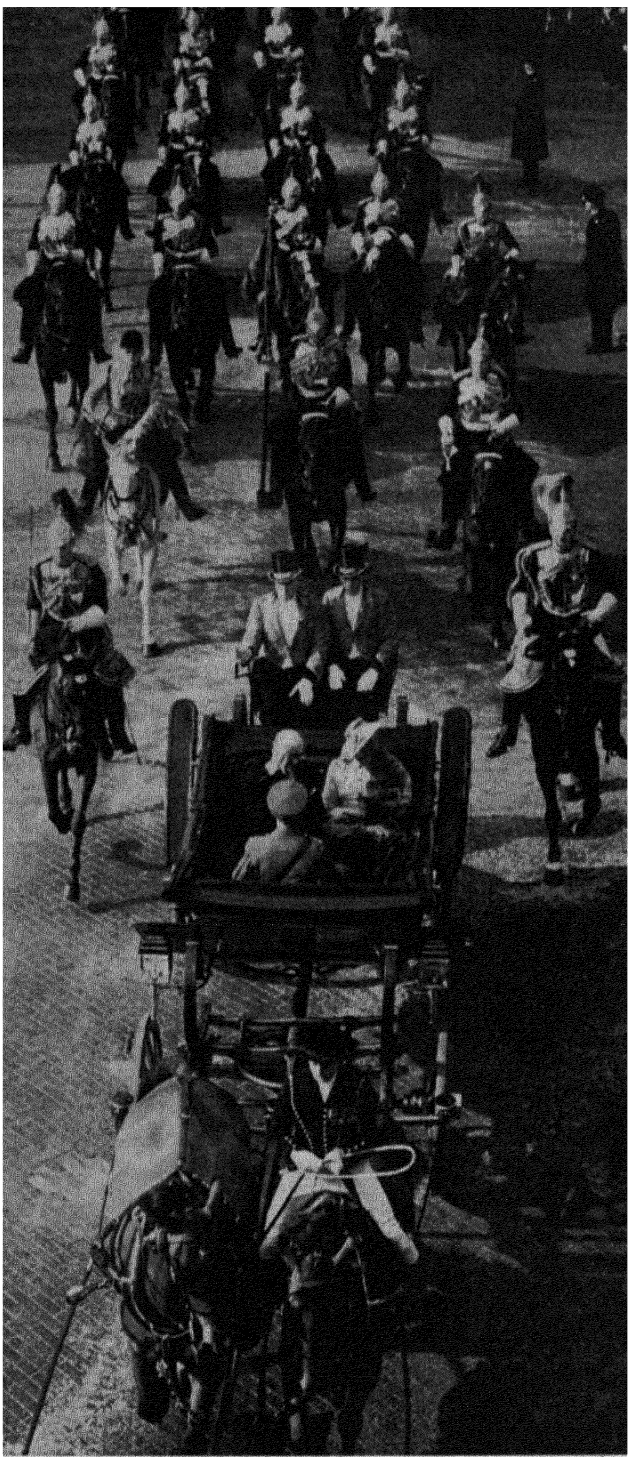


A cartoon by Low in the "Daily Herald," London, on Oct. 6, 1950 entitled "Red faces under the bed."

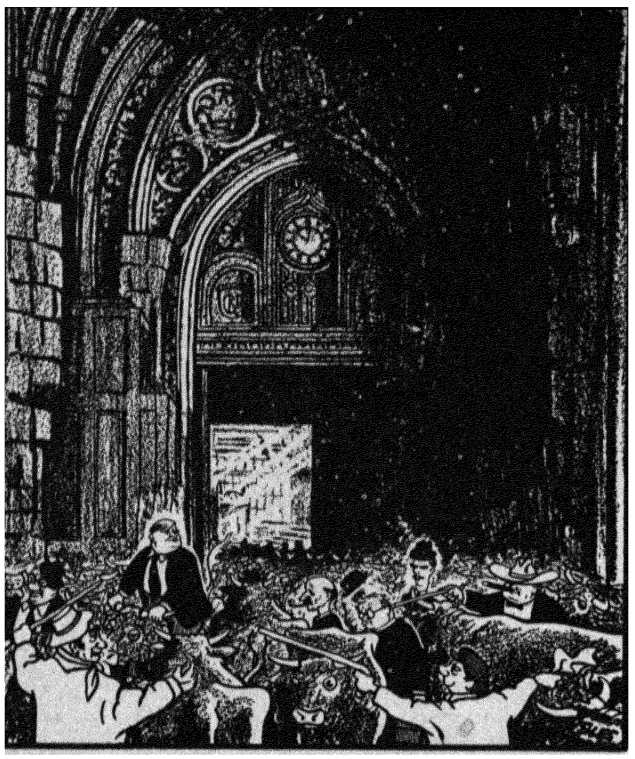
start of the European Recovery programme in March 1948. The progress made by the United Kingdom towards international solvency was based on two fundamentals of policy, both pressed by Sir Stafford Cripps with a puritanical fervour. His new commonwealth was to pare and prune to the bone all its purchases from dollar countries; and equally it was to expand its sales to the dollar area by every business device and every ingenuity of salesmanship. To some extent Sir Stafford Cripps (*q.v.*) stood as the symbol of British determination to regain economic and financial self-respect. But to put it that way does less than justice to the impact made by Sir Stafford upon the postwar scene. He not merely expressed a British mood: he shaped it. The two were interacting. Without Cripps, however, the need for Crippsian policies persisted. If imports from the American continent had been reduced, those Great Britain was still taking were costing more through the devaluation which had so stimulated our exports. And similarly more exports had to be sold to provide a given quantity of dollars. The benefits of devaluation were not obtainable free of cost. Indeed, the effect of devaluation on the price of essential raw materials could be felt increasingly as the year went on. It might have caused more serious worry had not the invasion of Korea and the rearmament of the west bolstered world markets and relieved Great Britain, temporarily at any rate, of the prospect of a buyers' market.

At home, the government's domestic finance continued to be exposed to criticism. Whether the fiscal policies imposed upon the British people were such as to invite the highest productive effort was a problem just as much political as financial. Its answer depended upon political philosophy. No one doubted the need to export; what was at issue was the method by which these exports were to be provided by British industry in the largest possible quantities and at the cheapest possible price. The chancellor's diagnosis of the ailment seemed reasonable: "The present danger continues to be one of excessive spending or deficient saving." But on the subject of the right prescription, the debate continued. Excessive government spending and a deficient encouragement to private saving did not help towards that proper balance between supply and demand which characterizes the healthy community life. As part of an effort to keep wage demands in cold storage the chancellor's budget offered relief in the lower rates of income tax. But on the other side, an increase of 9*d.* a gallon on petrol and on other light and heavy oils used as road fuel had its own effect upon the cost of living, more important perhaps from the psychological than from the strictly material point of view. The lapsing of the T.U.C. wage restraint policy, the demands of the rearmament programme, the threatened curtailment of U.S. aid in view of the improved balance of payments position and the revival in familiar panoply of a world sellers' market —all of them betokened a new bout of inflationary fever.

Industrial. The era of full employment was maintained through 1950 in full plenitude, with only faint stirrings of uneasiness about conditions in the world markets. Increasingly the advantages of devaluation were felt, so that price considerations mattered less than they had done in the latter part of 1949. Here and there, in individual industries, there was apprehension. Right from the beginning of 1950, organizations in the Lancashire cotton industry, for example, were expressing their fear of competition from Japan, whose cheap labour represented a constant threat to western standards. There was contact on the problem between British and U.S. textile industry leaders, but without the comforting safeguards looked for in some quarters. In cotton as in nearly all other industries the salvation was seen to lie in more efficient production from more modern plant. Productivity teams continued to cross the Atlantic to inspect the American way of industrial life. They all came back with the same story: they all returned missionaries speaking the language of output per man-hour. The word incentives, too, came into even stronger vogue, and it was seen that as the whole western world began to rearm (an autumn decision taken because of renewed fear of the U.S.S.R.) the incentive to modernize, adapt, re-equip and refurbish lost a touch of its latter-day power. At the very moment that a buyers' market appeared on the horizon it was lost to sight again, misted over by the harrowing doubts which assailed a world living neither at peace nor in war.



President and Madame Auriol of France seen driving through the city of London during their state visit in March 1950.



A cartoon by Giles in the "Daily Express" (London) in Oct. 1950, entitled "Same old mix-up as last year—opening parliament the same week as the dairy show."

The approach (nothing more) to a war economy put an end to pleasurable anticipation that the government might light some more bonfires of discarded controls. Steadily, one by one, regulations had continued to be thrown away in the earlier part of the year. Milk rationing and registration, petrol rationing—they were the kind of outward symbols of the country's austere determination which had been dropped. With the announcement of rearmament, hope of further progress in the same direction was temporarily abandoned. Inflation resumed its prominent place in the English vocabulary. Official indices showed that over most of 1950 the cost of living had risen but a point or two. Impressions collected by the housewife did not seem to tally, however, and there was no surprise when great new cracks began to appear in the wage-freeze policy. In the middle of January a conference of trade union executives called to consider recommendations made by the general council of the T.U.C. had shown which way the wind was blowing—and that it was most certainly a thaw wind. The general council, sizing up the situation after devaluation, had held on as best it could to wage restraint. Its views were endorsed, but by a majority so narrow as to vitiate any influence the T.U.C. might have been trying to exert. The general council was fighting a losing battle, its final defeat occurring at the Brighton congress when a policy of "modified restraint" suggested by the council was rejected from the floor, How far the overthrow of official trade union policies could be attributed to Communist agitation within the unions remained the subject of exciting political controversy. (*See* also COMMUNIST MOVEMENT; TRADE UNIONS; WAGES AND HOURS).

Keen political eyes were also turned upon the recently nationalized industries for evidence to support or refute the case for public ownership. Towards the end of 1949 the British Transport commission had appealed to the minister for permission to increase freight charges by 3*s.* 4*d.* in the £, and when the Transport tribunal heard the application early in the new year it heard also the depressing story of the commission's life, still short but full of sadness. The details could be studied later in the second annual report of the commission, which showed that in 1949 a loss of over £20 million had been incurred. For the same 12 months the Coal board was able to show an over-all surplus of nearly £9·5 million, but without export sales at prices above domestic levels the industry would have been much less happily placed.

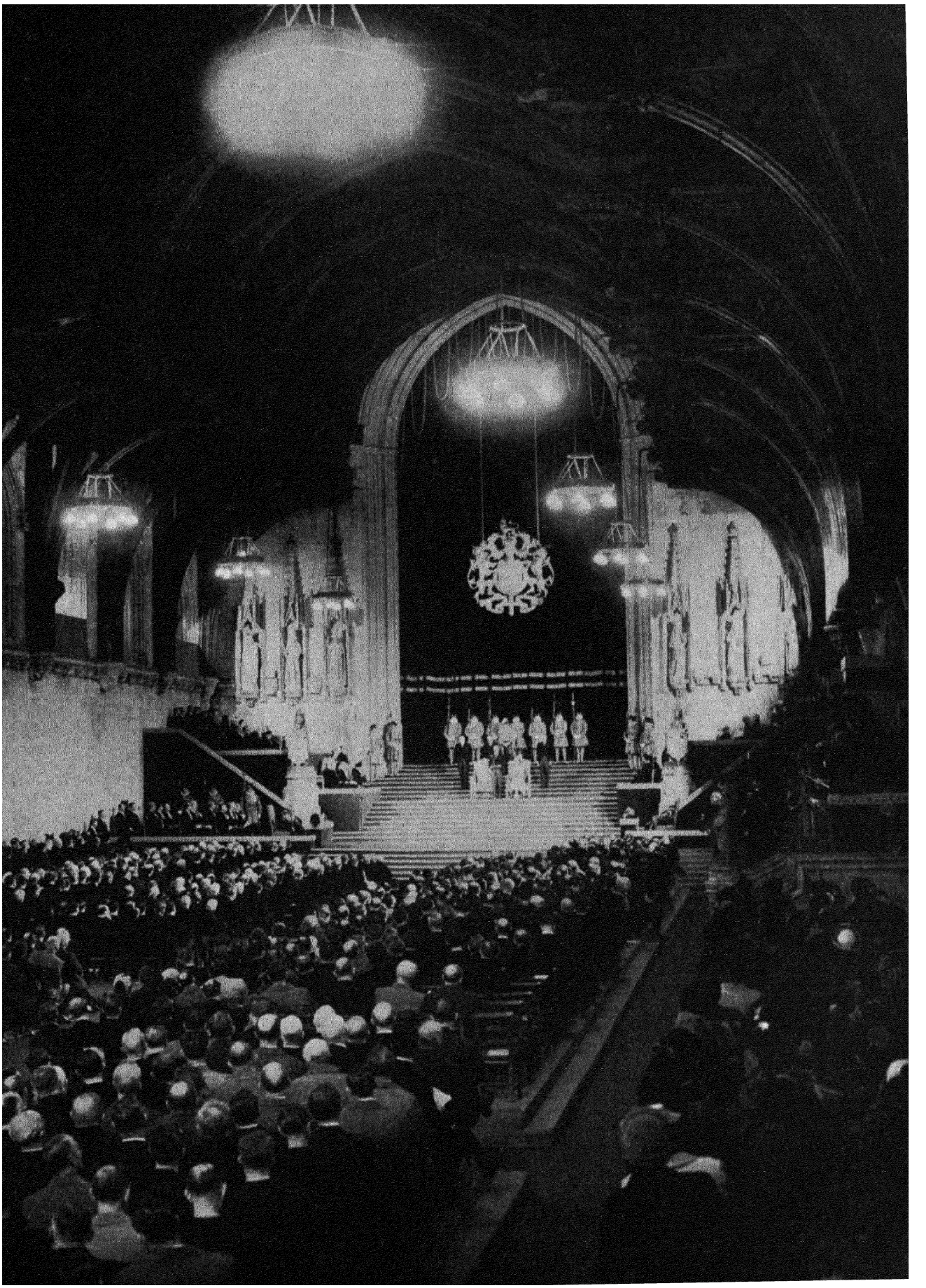
The British Electricity authority, struggling to keep pace with a constantly growing demand, and involved in a programme of heavy capital outlay, came through the first 18 months of its existence with £4,391,000 to spare. On the public utilities as upon the whole industrial machine rearmament threatened to impose new stresses and strains and to raise fresh difficulties over the supply of materials and the distribution of labour. (*See* also NATIONALIZATION).

Foreign Policy. The end of 1950 found English minds still living in two worlds and wondering whether the two together would ever make sense. Could membership of the Commonwealth be the complement of leadership in Europe? Defensive measures to protect western Europe against a possible assault by the U.S.S.R. commanded undivided support, so that proposals and plans for military co-operation could be discussed without mental reservations. The signing on Jan. 27 of the Anglo-American Mutual Assistance agreement, concluded under the North Atlantic treaty of 1949, testified to the British readiness to enter into military commitments. Similarly, when the Communist invasion of South Korea raised a direct challenge to the United Nations and when Great Britain was asked for military help to answer the challenge, its view was not in question. It favoured direct military support of the United Nations in defence of collective security. Hitlerian ghosts accomplish much good work.

The demand for rearmament created by a worsening international situation could be met if not cheerfully at least with a singleness of purpose and a mind free of doubt. It seemed that no alternative existed. Already Britain was budgeting to spend something like £780 million on defence, which represented 23·6% of all expenditure on government account and about 7·6% of the national income. Put another way, it meant that Britain was spending £15 a head of the population on military preparedness. But this was not enough. In July, soon after the attack in Korea, the government announced its resolve to divert another £100 million to defence. Even then, the last word had still to be spoken. But a few days later there came the news of a three-year defence plan involving a total outlay in that period of £3,400 million—10% of the national income. An increase in pay to the forces, agreed-to as part of a new recruiting campaign, pushed up this prodigious figure by another £200 million.

In matters affecting the political integration of western Europe, however, there was no such spectacular determination. The Council of Europe (*q.v.*), scarcely weaned as yet, struggled to embody the novel and noble ideas stirring within the continent, but it received only condescending patronage from the British government. By the Labour party the whole ideal of political federation such as Europe hankered after was given but a cold formal nod of the head. Indeed, the party's national executive committee went so far as to proclaim in a statement on *European Unity* that no Socialist government in Europe could submit to the authority of a body whose policies were decided by an anti-Socialist majority.

The scene in Westminster Hall, Palace of Westminster, on Oct. 26, 1950, when the King replied to addresses of both houses of parliament on the occasion of the opening of the new House of Commons chamber.



For similar if not identical reasons the seeds that Robert Schuman (*q.v.*) scattered when he produced his "plan" for European Coal and Steel pool (*q.v.*) fell on stony ground. In an announcement made with considerable political acumen, the French foreign minister proposed the creation of a single authority to control the production of steel and coal in France and Germany, with membership open to other European countries. The six powers who later sat together to see what they could make of it all did not include Great Britain, whose attitude was one of doubt and isolation.

Within the family of the Commonwealth, meanwhile, economic development was claiming much attention. The Colombo conference of foreign ministers, held in January, engaged in an extensive review of political and economic problems of south and southeast Asia and among other things agreed on the establishment of a Commonwealth Consultative committee. From the first meeting of this Consultative committee (held in Sydney in May) there emerged the beginnings of a technical assistance scheme between Commonwealth governments. For the Commonwealth, while it recognized the need to uphold international authority through military action (as in Korea), attached equal importance to economic well-being in Asia as an effective buffer to Communist advance.

In the colonial territories as a whole about 350 major projects calling for capital expenditure of £400 million were either planned or under way. The experience of the Overseas Food corporation in its African groundnuts scheme became steadily more unhappy, however, the big mistake (according to the Committee of Public Accounts) having been the "failure to realize the impracticability of the original plans in the conditions existing immediately after the war." Accordingly, the corporation prepared a "clear-cut modification" of the groundnuts scheme, which was officially admitted to have failed in Jan. 1951. (F. Sn.)

Education. *England and Wales* (March 1949): nursery schools and classes, pupils 85,831; primary schools 23,201, secondary schools 4,680, total pupils 5,528,776; special schools (for children physically or mentally handicapped) 576, pupils 45,073; further education (mainly evening institutes) 9,856, pupils 51,670 full-time and 2,063,539 part-time; full-time teachers (all schools) 216,757. *Scotland*, (March 1948): schools, primary 1,981, pupils 362,078, teachers 11,113; secondary 1,050, pupils 399,382, teachers 16,215; further education 911, pupils 241,607. Universities (March 1949): England 16, students (full and part-time) 72,121, teaching staff 7,199; Scotland 4, students 18,068, teaching staff 1,704; University of Wales, students 5,139, teaching staff 474; total, universities 21, students 95,328, teaching staff 9,377.

Agriculture. Table I gives the estimated quantities of main crops in four prewar years (average), one wartime peak year and four postwar years.

TABLE I. AGRICULTURAL PRODUCTION IN THE UNITED KINGDOM
(In '000 long tons)

	1934-38 av.	1943	1947	1948	1949	1950 est.
Wheat	1,708	3,447	1,667	2,361	2,136	2,520
Barley	766	1,645	1,619	2,027	2,043	1,595
Oats	1,978	3,064	2,509	2,963	2,828	2,617
Rye	12*	95	22	47	53	56
Mixed corn	75*	394	386	518	640	698
Potatoes	4,911	9,822	7,766	11,798	8,861	9,637
Sugar beet	2,191*	3,923	2,960	4,319	3,644	5,049

* 1938.

In 1945-48 the United Kingdom was importing a yearly average of 3,850,000 tons of wheat and 695,000 tons of wheat meal and flour. The yearly average of sugar production was 551,000 tons in 1947-49 as against 426,000 in 1934-38; import of sugar in postwar years amounted to 2 million tons yearly as against 2,262,000 before World War II.

TABLE II. LIVESTOCK IN THE UNITED KINGDOM
(In '000 head at June in each year)

	1938	1943	1947	1948	1949	1950
Cattle	8,762	9,259	9,567	9,806	10,229	10,607
Sheep	26,775	20,383	16,713	18,164	19,473	20,408
Pigs	4,383	1,829	1,628	2,151	2,811	2,976
Poultry	74,246	50,729	70,006	85,327	95,223	95,986

Sales of milk in the United Kingdom amounted to 1,249 million gal. in 1938, 1,618 million gal. in 1948 and 1,737 million gal. in 1949.

Agricultural production in the years 1948-50 was about 30% above the 1934-38 average. About 40% of Britain's food was home produced, compared with about 30% prewar. At the end of the year meat, bacon, butter, margarine, cooking fat, cheese, sugar, sweets and tea continued to be rationed. In 1950-51 £410 million was provided for food subsidies, compared with £462·6 million in 1949-50.

TABLE III. BRITISH FISHERIES: TOTAL CATCH*

	1938	1948	1949	1950
England and Wales:				
Total catch ('000 long tons)	776·6	722·0	708·6	629·9
Total catch (£'000)	12,642	34,789	29,431	26,298
Scotland:				
Total catch ('000 long tons)	269·0	320·3	293·0	252·8
Total catch (£'000)	3,907	12,038	10,309	9,404

* Excluding shell fish, but including grey mullet and whitebait.

Industry. Number of industrial establishments with more than 10 employees (April 1948): 51,040. Distribution of total manpower in 1938, 1944 and 1950 (at June in each year) is given in Table IV.

TABLE IV. EMPLOYMENT IN GREAT BRITAIN ('000)

	1938	1944	1950
Total working population	19,473	22,008	23,325
Working population (men)	14,476	14,901	16,055
Forces (incl. women's services)	385	4,967	690
Forces (excl. women's services)	385	4,500	666
Total in civil employment	17,378	16,967	22,354
Agriculture, forestry, fishing	949	1,048	1,261
Industry	8,716	9,062	11,065
Registered unemployed	1,710	54	274

TABLE V. PRODUCTION OF FUEL AND POWER IN GREAT BRITAIN

	1938	1946	1948	1949	1950
Coal (million long tons)	226·99	190·06	209·40	215·09	216·30
Gas (million cu.ft.)	349,171	471,943	505,369	522,600	531,600
Electricity (million kwh.)	25,708	42,742	48,084	49,116	53,540

The total number of wage-earners in the coal-mining industry decreased from 782,000 in 1938 to 698,000 in 1941; the number was 727,000 in Jan. 1949 but decreased again to 686,000 in Nov. 1950. The overall absenteeism which stood in 1938 at 6·44%, averaged 11·84% in 1950. The average output in tons per manshift (for all workers) worked was 1·14 in 1938, 1·00 in 1945 and 1·19 in 1950.

TABLE VI. PRODUCTION OF METALS IN GREAT BRITAIN ('000 tons)

	1938	1946	1948	1949	1950
Iron ore (30% metal content)	11,859	12,173	13,189	13,416	12,948
Pig iron	6,761	7,761	9,276	9,659	9,801
Steel ingots and castings	10,398	12,695	14,877	15,548	16,293
Virgin aluminium	23·0	31·5	30·0	30·3	29·5
Copper, refined	—	81·7	107·7	105·1	115·7
Virgin zinc	—	65·4	72·1	64·1	70·2
Lead, refined	—	27·0	36·2	35·8	74·1

The British steel industry achieved in 1950 a record output and the same could be said of the motor industry. In 1950 the estimated output of passenger motor-cars was 530,000 and that of commercial road vehicles was 260,000 (the figures for 1938 were 341,000 and 104,000 respectively).

TABLE VII. TEXTILES PRODUCTION IN THE UNITED KINGDOM

	1937	1946	1949	1950
Cotton woven cloth (million linear yd.)	3,640	1,626	2,002	2,106
Woven wool fabrics (million sq. yd.)*	475·2	345·9	438·6	457
Rayon filament yarn (million lb.)	114·9	107·6	171·5	208
Rayon staple fibre (million lb.)	33·5	70·8	117·2	174

* Excluding blankets, of which some 25 million sq.yds. were produced in 1950.

Industrially, the year was one of outstanding progress, but by December there was both actual and potential shortages of many industrial raw materials: the impact of rearmament on British economy was beginning to be felt.

Index numbers of industrial production: British Central Statistical office (1946=100): 1949=129; Oct. 1950=150. Statistical office of the U.N. (1937=100): 1949=116; July 1950=128.

Foreign Trade. In Table VIII the value of imports is expressed in c.i.f. (carriage, insurance, freight) prices and the value of exports in f.o.b. (free on board) prices.

TABLE VIII. EXTERNAL TRADE OF THE UNITED KINGDOM

	1938	1946	1947	1948	1949	1950
Value (£ million)						
Imports	919·5	1,301·0	1,791·9	2,078·0	2,274·1	2,602·9
Exports	470·8	914·7	1,138·9	1,582·9	1,786·4	2,170·1
Re-export	61·5	50·2	59·2	60·6	58·0	85·0
Volume index*						
Imports	100	68·3	77·7	80·8	84·0	†
Exports	100	99·3	108·7	136·3	151·0	†

* Quantities revalued at 1938 prices and expressed as a percentage of the value of imports or exports in 1938. † Figures not available.

In 1950 the value of exports rose by 21% over 1949 and the increase in volume was about 16%. The volume of imports was virtually unchanged, but the value was about 14% higher. However, the adverse balance was reduced from £429·7 million to £347·8 million.

Main commodities imported (1950): food, drink and tobacco 39·3%; raw materials and articles mainly unmanufactured 34·5%. Main commodities exported (1950): articles wholly or mainly manufactured 86·7%. Main sources of imports (1950): sterling area (38%); non-sterling O.E.E.C. countries (25·2%); U.S. (8·1%); Canada (6·9%). Main destinations of exports: Sterling area (47·7%); non-sterling O.E.E.C. countries (25%); Canada (5·8%); U.S. (5·2%).

Transport and Communications. Railways (1949): Great Britain, total first track (all gauges) 19,700 mi.; Northern Ireland 1,035 mi. Passenger journeys originating (British Railways, monthly average, 1949) 82·7 million; average receipt per journey 2*s.* 3½*d.* Goods traffic originating (weekly average, 1949) 5·38 million tons. Roads (1948): Great Britain 183,659 mi. Motor vehicles licensed (Great Britain, Aug. 1950): 4,310,000, including 2,237,000 private cars. Air transport (U.K. airlines, all services, monthly averages 1949): aircraft miles flown 3,677,000; passengers carried 76,400; passenger-mi. flown 51·1 million; freight carried 1,180 tons; freight carried in ton-mi. 1,507,000; mail carried 442 tons; mail carried in ton-mi. 880,000. Shipping: merchant vessels on the U.K. register of 500 gross tons and over (Nov. 1950): non-tankers 13,557; tankers 3,918. Already by June 1949 the volume of 18,093,000 gross tonnage registered was 202,000 more than in 1939. Number of telephones, private stations (March 31, 1950): 5,171,491 (70% with automatic dial). Wireless receiving sets licensed (Dec. 31, 1950): 12,295,000, including 586,100 television sets.

Finance and Banking. Table IX gives the United Kingdom's postwar budget figures. The fiscal year ends on March 31.

TABLE IX. UNITED KINGDOM REVENUE AND EXPENDITURE (£ million)

	1945-46 actual	1946-47 actual	1947-48 actual	1948-49 actual	1949-50 actual	1950-51 est.
Revenue	3,284·5	3,341·2	3,844·8	4,166·5	3,924·0	3,897·8
Expenditure	5,484·3	3,910·3	3,209·5	3,337·1	3,356·6	3,455·1

National debt (£ million, Dec. 31, 1950): 26,426. Currency circulation (£ million, Dec. 31, 1950): 1,333·2. Gold and dollar reserves of the sterling area (U.S. $ million; in brackets, £ million at £1 = $4·03): Dec. 31, 1945: 2,476 (611); Sept. 18, 1949, at the old exchange rate: 1,340 (332); at the new exchange rate (£1 = $2·80) the gold and dollar reserve represented £478 million. On Dec. 31, 1950, the gold and dollar reserve stood at $3,300 million, or £1,178 million.

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GREECE. Kingdom in the southern part of the Balkan peninsula. Area: 51,182 sq.mi. including the Dodecanese islands (1,035 sq.mi.); the mainland accounts for 41,328 sq.mi. and the islands, the largest being Crete (3,235 sq.mi.), for 9,854. Pop.: (1940 census) 7,344,860; (Dec. 31, 1949, est.) 7,960,000. Language (1940 census): Greek 6,794,308 (93%); Turkish (Turks and Turkish-speaking Greeks from Anatolia) 222,968; Macedonian Slav 81,860; Rumanian (Koutso-Vlachs) 57,263; Albanian 49,629; Bulgarian (Pomaks) 18,086, etc. Religion (1940 census): Greek Orthodox 7,090,192 (96·5%); Roman Catholic 29,136; Moslem 134,722; Jewish 53,094 (reduced to 9,000 by German executions). Chief towns (1940 census, municipal area only): Athens (cap., 481,225); Piraeus (205,404); Salonika or Thessaloniki (226,147); Patras (79,570); Volo (54,919). Ruler, King Paul I; prime ministers in 1950, Alexandros Diomidis (*see* OBITUARIES), Ioannis Theotokis (from Jan. 6), Sophocles Venizelos (*q.v.*) (from March 23), Nikolaos Plastiras (*q.v.*) (from April 15) and Sophocles Venizelos (from Aug. 21).

History. The final liquidation of the Communist rebel forces throughout the country, which was completed by the end of 1949, enabled the government to deal with the problem of the repatriation of the 700,000 refugees who had fled from areas of military operations to the safety of the towns. With the assistance of the army, which provided most of the transport, almost all the refugees were able to return to their villages where, with government aid in the form of food, agricultural implements and building materials, they could start to rebuild their homes and resume work on the land. At the same time the reconstruction programme made substantial progress. The Athens-Salonika railway line was re-opened along its whole length after an interruption of nine years, and four major hydro-electric projects were launched at Aliveri (Euboea) and on the rivers Ladon (Peloponnese), Louros (Epirus) and Vodas (Macedonia). These works were being financed out of E.R.P. funds. In September Greece's share of E.R.P. aid was cut by $62 million for the year 1950-51 because of the government's inability to provide the necessary funds in drachmae required to carry out the capital investments envisaged in the economic reconstruction programme.

In October, a trade delegation, led by deputy premier Gheorghios Papandreou, reached agreement with the government of Western Germany for the export of 35,000 tons of Greek tobacco over the years 1951-53. Although encouraging as a start to the resumption of Greco-German trade, the above figure still fell short of the prewar exports of Greek tobacco to Germany.

The cessation of guerrilla activities also made possible the relaxation of restrictions and emergency legislation enacted during the previous four years for combating the Communist rebellion. The Emergency Measures act of June 1946 (known as " Decree No. 3 ") was rescinded on Jan. 13 and martial law was lifted throughout the country on Feb.8. While the international threat to Greece was considered to have receded sufficiently for all British troops still remaining in the country to be withdrawn, the British foreign secretary, Ernest Bevin, re-affirmed in a statement issued on May 19 that the British government remained vitally concerned in the independence, integrity and security of Greece.

Election and Politics. The restoration of internal security also made possible the holding of fresh elections. On Jan. 5 the coalition government of Populists, Liberals and Unionists under Alexandros Diomidis resigned, and a " caretaker " government, with a special mandate to hold the elections, was formed under the former president of the Chamber of Deputies, Ioannis Theotokis. On Jan. 7 parliament was dissolved, having run almost its full term of four years, during which period there were eight changes of government. A general election was held under the exsisting system of proportional representation on March 5. More than 2,800 candidates from 26 different groups contested the 250 seats of the new chamber (as compared with 354 seats in the previous chamber). The Populists won 62 seats, the Liberals 56 and the Democratic Socialists (Papandreou) 35. A new political party, the National Progressive Union of the Centre (E.P.E.K.), led jointly by General Plastiras and Emmanuel Tsouderos, won 45 seats. (*See* ELECTIONS.)

No single party having an overall majority, the three centre parties (Liberal, E.P.E.K. and Democratic Socialist), which between them held 136 seats, concluded an agreement to form a government. The king entrusted the mandate of forming a government to the leader of the Liberal party, Venizelos, as head of the largest of the three. As the other two partners to the agreement insisted that the premiership should be assumed by Plastiras, Venizelos finally formed a government consisting exclusively of Liberals. This government resigned on April 14 and was succeeded the following day by the centre coalition envisaged in the original agreement; Venizelos, while giving his support, declined to participate personally. The new government continued in office until August 18, when the Liberals withdrew their support after a disagreement over the scope of the leniency measures adopted by the government. The cabinet that followed was again an exclusively Liberal one under Venizelos,

but was widened first (Aug. 28) by the inclusion of the Democratic Socialist party and later (Sept. 13) by the inclusion of the Populists. This government lasted until Nov. 2, when it resigned following a disagreement between Konstantinos Tsaldaris, the Populist leader, and the other two party leaders regarding the attitude of the government over investigation into charges of misappropriation of funds in the Piraeus Port organization in which members of the Populist party were alleged to be implicated. It was succeeded by a two-party coalition of Liberals and Democratic Socialists, with Venizelos as premier and Papandreou as deputy premier. At the same time, dissensions within the Populist party itself culminated in the secession of 25 of its parliamentary members, who rejected the leadership of Tsaldaris and formed an independent group under Stefanos Stefanopoulos.

In the field of international relations, the outstanding event of 1950 was the improvement of relations with Yugoslavia. The first signs of a rapprochement appeared during the premiership of Plastiras, Marshal Tito having stated on April 6 that Yugoslavia was prepared to co-operate with a left-centre government in Greece. Shortly afterwards the Greek government nominated a minister to Belgrade while Yugoslavia promoted its *chargé d'affaires* in Athens to the rank of minister plenipotentiary; but before the new ministers could present their credentials, the situation deteriorated following a statement by Edvard Kardelj, the Yugoslav foreign minister, raising the question of a Macedonian minority in Greece. This remark provoked a reply from Athens to the effect that the Greek government did not recognize the existence of such a minority and that the raising of such a question was inconsistent with the spirit of the friendly relations which it was desired to promote between the two countries. Repeated references to this question by the Yugoslav press and radio and the abortive results of all efforts to secure the repatriation of Greek children removed to Yugoslavia by the Greek Communists during the rebellion produced a deadlock in Greco-Yugoslav relations until November, when Marshal Tito categorically stated in an interview with the *New York Times* that Yugoslavia had no territorial claims relating to Greek Macedonia. This was followed by the repatriation, on Nov. 7, of some of the Greek military personnel taken into Yugoslavia as prisoners by the Greek rebels and, on Nov. 24, by that of the first group of Greek children similarly abducted by the rebels and repatriated in conformity with the U.N. resolution relating to this matter. On Nov. 30 Venizelos announced in the Chamber of Deputies the government's decision to resume normal diplomatic relations with Yugoslavia and the appointment of Spyro Kapetanidis as Greek minister plenipotentiary to Yugoslavia. On Dec. 5 Milan Jovanović was appointed Yugoslav minister to Greece.

In May, a Cypriot delegation arrived in Athens to deliver to the Greek government the volumes containing the signatures of 215,108 Cypriots, or 95% of the adult Greek population of the island, demanding union with Greece. The delegation were received by the king and by the prime minister, Plastiras, who informed them on May 26 that this question would be dealt with "within the framework of friendly relations with our great ally Britain." The delegation proceeded to London, where they were refused an interview by the colonial secretary, James Griffiths. (*See* CYPRUS.)

In November and December, the Greek question was debated by the U.N. fifth general assembly in New York, to which the U.N. Special Committee on the Balkans submitted its annual report covering the period Sept. 1949 to July 1950. In this report, the committee stated that with the elimination of large-scale guerrilla activity, the threat to Greece had altered in character. Pointing out that many thousands of Greek rebels had fled beyond the northern



Two young girls cleaning a stone oven at a village home in northern Greece when they returned in 1950 after being evacuated during the Communist uprising.

frontiers of Greece, the report said that the disarming and disposition of these rebels had not been verified by any international agency and that the Greek Communist leaders themselves claimed that their forces still existed. The committee expressed the opinion that the continuing potential threat to Greek political independence and territorial integrity was to be found at present chiefly in Bulgaria. After a long and acrimonious discussion, the assembly finally approved the report and adopted various resolutions in accordance with the recommendation made by the committee, which it decided to maintain in its functions for another year. (A. A. P.)

Education. Schools (1948-49): primary 9,986, pupils 1,218,000; secondary 507, pupils 169,836; universities 2, professors and lecturers 289, students 13,337; institutions of higher education 9. Illiteracy (1940) 27%.

Agriculture and Fisheries. Main crops ('000 metric tons, 1949; 1950 est. in brackets): wheat 720 (935); barley 130 (212); oats 85 (117); rye 30 (50); maize 240; potatoes 329; rice 22; olive oil 196. Livestock ('000 head): cattle (Dec. 1949) 678; sheep (Dec. 1948) 6,631; pigs (Dec. 1949) 509; horses (Dec. 1948) 231; mules (Dec. 1948) 142; poultry (Dec. 1948) 8,626. Fisheries; total catch ('000 metric tons, 1949) 37.

Industry. Fuel and power: lignite ('000 metric tons, 1949) 131·5; electricity (installed capacity, kilowatts, 1948) 145,000. Raw materials ('000 metric tons, 1949): chrome ore 3·1; magnesite 22·9 bauxite 44·3; iron pyrites 14·3.

Foreign Trade. (Million drachmas, 1949; 1950, six months, in brackets) import 2,048,112 (1,119,681); export 574,728 (209,006). Main sources of imports (1949): U.S. 41%; U.K. 9%; Turkey 5%. Main destinations of exports: U.K. 21%; U.S. 19%; France 11%.

Transport and Communications. Roads (1949): 4,189 mi. Licensed motor vehicles (Dec. 1949): cars 7,500; commercial 16,500. Railways (Dec. 1949): 2,140 mi. Shipping (under Greek flag only, July 1949): number of merchant vessels over 100 gross tons, 377; total tonnage 1,329,257. Telephone subscribers (1949): 65,078. Wireless receiving sets (1949): 44,500.

Finance and Banking. (Million drachmae) budget: (1949-50) revenue 5,494,000, expenditure 5,830,000; (1950-51 est.) balanced at 5,246,000. Currency circulation (July 1949; July 1950 in brackets): 1,292,000 (1,676,000). Bank deposits (June 1949; June 1950 in brackets): 1,028,000 (1,840,000). Monetary unit: *drachma* with an official exchange rate D. 42,000 to the pound and D. 15,000 to the U.S. dollar.

See Sir Reginald Leeper, *When Greek Meets Greek* (London, 1950).

GREENLAND. Large island (839,782 sq.mi., about 705,000 sq.mi. covered by an ice cap), a Danish possession in the north Atlantic ocean, northwest of Iceland. Pop. (1945 census); 21,412, distributed in small settlements along west coast, except for 1,372 on east coast; 580 were Europeans (mostly Danes), the rest native Greenlanders (Eskimos). Language: Danish and Eskimo. Religion: Lutheran. Capital, Godthaab (second governor's seat, Godhavn). Governors, C. F. Simony and N. O. Christensen; governor general, from Oct. 1, 1950, Poul Hugo Lundsteen.

History. The proposals of the Greenland Commission for Administrative and Economic Changes, approved by the Greenlanders who were represented in this body, were passed by the Danish parliament during April and May 1950. The changes were of a revolutionary character and aimed at modernizing and developing Greenland's political, social cultural and economic life. The administration was to some extent centralized. There was to be only one governor (Landshövdingen), who was to be chairman of the Country Council (Landsraadet), which replaced the previous district councils. Greenlanders and Danes living in Greenland had the right to vote when 23 years old and were eligible to the Country Council and the municipal councils. The Country Council was authorized to impose taxes and to distribute the revenue for its own and for the municipal councils' purposes; it was also authorized to deal with and decide matters delegated to it by the Danish parliament. New schools would be organized with Danish as the language of instruction. Sanatoria and a new hospital would be built and existing hospitals would be modernized and extended.

In the economic field the monopoly of Grönlandsk Handelsselskab (Greenland Trading company) was abolished and private enterprises by Danes were allowed, their activity, however, being controlled in order to avoid exploitation of the Greenlanders. Noteworthy was the fact that these freer economic conditions were desired by the Greenlanders themselves in an endeavour to improve their economy. Danish and Faeroese fishing vessels were admitted to Greenland waters, and the state would lend money to Greenlanders wishing to acquire new fishing equipment. The cost of the development of Greenland's social and economic life was estimated at Kr. 95 million.

Education. Schools (1948): infant and primary 175, pupils 4,200, teachers 237; post-primary 4, pupils 100, teachers 15; technical 1, pupils 50, teachers 2; institutes of higher education 2, students 45, lecturers 10.

Foreign Trade. (1949) Import Kr. 30,036,000, export Kr. 604,000.

Finance and Banking. Budget (1948-49) expenditure Kr. 23,593,000, revenue Kr. 17,449,000. Currency circulation (Dec. 1949): Kr. 2,700,000 Savings bank deposits: Kr. 2,800 000. Monetary unit: the Danish krone, with an exchange rate of Kr. 19·34 to the pound sterling.

See A. J. Fischer, " Greenland's Silent Revolution " and P. Frenchen, " A Front Moves North," both in *The Norseman* (London, May-June 1950). (H. LN.)

GRENADA: *see* WINDWARD ISLANDS.

GREYHOUND RACING. In Britain, Ballymac Ball, owned by T. F. Nicholl (Belfast), was the champion track greyhound of 1950. His prize and trophy values total for the year (from 15 races) was £3,530. Ballymac Ball won the Greyhound Derby at the White City, London, and the International and the Laurels, both at Wimbledon, where he was trained by S. Martin.

Other winners were Fawn Mack (St. Leger), Ballycurreen Garrett (Thousand Guineas, Welsh Derby), Behattans Choice (Golden crest), Crossmolina Rambler (Irish Derby), Sandown Champion (Easter cup), and Ballyedmond Fergus (Stewards' cup). The most successful sire of 1950 was Mad Tanist, an Irish greyhound, who had a record number of progeny running on British and Irish tracks.

Some 20 independent tracks continued to operate without using their totalizators, so making bookmakers at those tracks not liable to taxation payable if the totalizators had been used. This caused a further decline in revenue from totalizator and bookmaker duty. Revenue in 1949 had been £7,800,000; in 1950 it was expected to be £6,500,000.

On National Greyhound Racing club tracks some 60 track speed records were broken. Notable was a new 525 yd. record (28·57 sec.) at the White City, London, by Red Wind, a greyhound alleged at an Old Bailey trial to have been an Irish greyhound named Waggles substituted for a puppy registered as English-bred. Two brothers were sentenced for substituting greyhounds for others.

The Irish Coursing club sought help from the parliament of the republic of Ireland for the establishment of a greyhound control board. This had been done in New South Wales, Australia, where all greyhound racing in 1950 came under the rules and licensing of a control board on which the government had two representatives. (J. A. Rs.)

GUADELOUPE. Former French colony situated in the Lesser Antilles, the status of which was changed in 1946 to that of an overseas *département*. It consists of two islands separated by a narrow channel and five smaller islands. Total area: 686 sq.mi. Pop.: (1936 census) 304,239; (1946 census) 278,464. The inhabitants are mainly coloured (Negro or mixed), speak a French patois and are Roman Catholic. Chief towns (pop., 1946 census): Basse-Terre (cap., 10,086); Pointe-à-Pitre (41,323). Prefect, Maurice Philipson.

History. The economic existence of Guadeloupe was bound up with the sugar-cane yield and with the export prospects for sugar and rum. Restored to a credit position in 1945, the balance of trade became again adverse in 1948 and in 1949 was almost at equilibrium. A strike which immobilized a Capesterre factory for several weeks in May and June prevented the 1950 sugar-production schedule from being fully completed. Exports from the port of Basse-Terre continued to increase in volume, banana cargoes particularly contributing to this development. Work on the new airport at Raizet, to the N.E. of Pointe-à-Pitre, was urged steadily forward and the official opening took place on May 20. By its central position in the arc of the West Indies the airport was admirably designed to maintain communications between Central, North and South America and was marked out for the busiest future.

Agriculture. Main products (1949, '000 metric tons): sugar cane 608·3 (1950: 782); sugar 42·7 (1950: 66·5); rum 115,849 hl.; bananas 78. Livestock (1950): cattle 58,000; pigs 30,000; sheep 7,000.

Foreign Trade. (Million M.Fr., 1949) imports 6,960·6; exports 6,842·4.

Transport and Communications. Ships entered (1949) 723; cargo ('000 metric tons), unloaded 114·4, loaded 111·6.

Finance. Budget: (1949 actual) balanced at M.Fr. 803·7 million; (1950 est.) balanced at M.Fr. 1,542·8 million. (C. A. J.)

GUAM: *see* PACIFIC ISLANDS, U.S.

GUATEMALA. Central American republic bounded W. and N. by Mexico, E. by British Honduras, the Caribbean sea, Honduras and El Salvador and S. by the Pacific ocean Area: 45,452 sq.mi. Pop.: (1940 census) 3,283,209; (1949 est.) 3,784,000, including almost two-thirds of pure Indians descending from Maya or Quiché strains, one-third of mixed Indian and Spanish (*ladinos*) and Indian and Negro blood, the balance of about 1% being white. Language: Spanish, but unknown to hundreds of thousands speaking only Indian dialects (numbering at least 18). Religion: predominantly Roman Catholic. Chief towns: Guatemala city (cap., pop., 1946 est., 225,000); Quezaltenango (pop., 1940 census,

33,538); Puerto Barrios (pop., 1940 census, 15,784). President of the republic, Juan José Arévalo.

History. A slight swing to the right carried the leftist administration of President Arévalo through a series of political crises in 1950, which included an abortive revolt and a presidential election. Failure of the government to commemorate the first anniversary of Colonel Francisco Javier Arana's assassination incited a Conservative demonstration on July 20 which was broken up by military and labour elements with the loss of three lives. The suppression of this demonstration brought on another by the university students, who held the minister of interior responsible and demanded his resignation. Labour, business and professional elements joined in a general strike in the capital city and some oppositionists demanded Arévalo's resignation. On July 24 the government suspended several constitutional guarantees and imposed a state of siege, but within two weeks restrictions were lifted.

In September the government cut itself off from Communist support by banning the party's weekly newspaper. Later in the month a Communist school was ordered to be closed, and 40 students were arrested for trying to continue their classes. However, the minister of interior who ordered the closure was given a vote of no confidence by the congress and was forced to resign. By October, government pressure to eliminate Communist influence was being extended to the labour unions. On Nov. 5, shortly before the election, some adversaries of the Arévalo administration attempted unsuccessfully to seize the military base of La Aurora allegedly in preparation for a general revolt, but the movement was crushed with 17 casualties. The government did not suspend constitutional guarantees.

In the election, held on Nov. 10-12, ten candidates contended for the presidency, to succeed Arévalo in 1951, but the administration's Revolutionary Action party scored an easy victory. The results, announced on Nov. 13, gave Colonel Jacobo Arbenz 242,901 votes. His nearest rivals were Miguel Ydigoras Fuentes of the rightist National Reconciliation party (68,146) and Jorge García Granados of the Democratic Civilian People's party (30,016). The administration party also tightened its grip in congress by winning 19 of the 24 seats at stake.

Education. Schools (1946): primary 4,425, teachers 8,266, pupils 225,362; secondary 45, teachers 819, pupils 5,494. The national university had 1,719 students.

Foreign Trade. Exports for 1949 totalled $51·9 million ($50·2 million in 1948); imports $68 million ($68·3 million in 1948). The U.S. supplied about 74% of the imports and took 92% of the exports. The chief exports were: coffee (1,991,181 bags of 132 lb. valued at $37·4 million) and bananas (753,228,000 lb., at $7·6 million).

Transport and Communications. In 1949 there were 608 mi. of railways and 4,800 mi. of highways (about 2,400 mi. all-weather surfaced). At the end of 1948 there were 5,200 cars, 4,500 lorries, 3,800 telephones and 38,000 wireless receiving sets.

Finance. Budget (1949-50 est.): balanced at $51·1 million; (1950-51 est.) balanced at $45 million. Deposit money (June 1950): $22·3 million. Currency circulation (June 1950): $35·6 million. Monetary unit: the *quetzal*, maintained at par with the U.S. dollar.

(M. L. M.)

GUIANA, BRITISH: *see* BRITISH GUIANA.

GUIANA, DUTCH (Surinam): *see* NETHERLANDS OVERSEAS TERRITORIES.

GUIANA, FRENCH: *see* FRENCH GUIANA.

GUINEA: *see* FRENCH WEST AFRICA; PORTUGUESE COLONIAL EMPIRE; SPANISH COLONIAL EMPIRE.

GUSTAF VI ADOLF (OSCAR-FREDREK-WILHELM-OLAF-GUSTAF-ADOLF), King of Sweden, of the Goths and of the Wends (b. Stockholm, Nov. 11, 1882). He was the son of King Gustaf V and Queen Victoria, née Princess of Baden. Of his marriage on June 15, 1905, to Princess Margaret of Connaught (d. 1920) there were four sons and a daughter. The eldest son, Prince Gustaf-Adolf-Oscar-Fredrek-Arthur-Edmund, Duke of Västerbotten (b. 1906) was killed in an aircraft accident in 1947; he had married in 1932 Princess Sybella of Saxe-Coburg and Gotha and their only son, Prince Carl-Gustaf-Folke-Hubertus, Duke of Jemtland (b. April 30, 1946), became crown prince in Oct. 1950. After the death of his first wife, Gustaf Adolf married on Nov. 3, 1923, Lady Louise Mountbatten (b. 1889), daughter of the first Marquess of Milford Haven. His hobby is archaeology and he is an expert in Chinese antiques of which he posses an imposing collection. He succeeded his father on Oct. 29, 1950, and the following day took the oath in the throne room of Stockholm palace before his government and people. He promised to govern the country gently, with justice and integrity. "Duty before everything" would be his guiding motto.

GYMNASTICS. The year 1950 saw a great expansion of gymnastics in Great Britain and presaged well for the Olympic year 1952.

The national championships, keenly contested and now more popular than before, were won as follows: individual, F. C. Turner, of London (men) and M. Hirst, of Leeds (women); gymnastic teams, London (men) and Swansea (women); physical training teams, Swansea (men) and Saltaire, Yorks. (women). In addition, for the first time, men champions of the year were declared on each piece of apparatus: horizontal bar, J. Flaherty (Manchester); parallel bars, K. Buffin (Barry, Wales); rings, P. May (Swansea); pommelled horse and vaults, also free standing physical exercises, F. C. Turner (London).

The second national coaching course, held at Leeds, was followed by the first national holiday training course (for personal performance) at Bisham Abbey.

The second inter-branch contest was held in Swansea: Wales scored 416·7, the North of England 392·4.

Amongst the 50 displays given by British champions was a televised contest, England v. Germany, which Germany won.

In the World Gymnastic Games at Basle in July, Britain was represented by the national champion, F. C. Turner, who was placed 47th out of 58 competitors. The winning teams were: Switzerland, Finland and France (men); and Sweden, France and Italy (women). Individual champions were: men, Walter Lehmann (Switzerland), Marcel Adatte (Switzerland) and Olavi Rove (Finland); women, Helena Rakoczy (Poland), Göta Petersson (Sweden) and Trude Kolar (Austria). (L. N.)

GYNAECOLOGY AND OBSTETRICS. In the years immediately before 1950 maternal mortality showed a considerable decline in most countries. In the U.S.A. it was 3·65 per 1,000 in 1940 and 1·32 per 1,000 in 1947. In England and Wales the comparable figures were 2·68 per 1,000 in 1940 and 1·18 per 1,000 in 1947. The fall was largely attributable to the decline in deaths from infection after childbirth, because of the introduction of the sulphonamides and of penicillin and other antibiotics, and to improved methods of asepsis and antisepsis. Haemorrhage remained the commonest cause of death, but steps were taken to overcome this by the establishment of blood banks, "flying squads" to take blood transfusion to mothers delivered in their homes and by routine blood grouping in pregnancy. The management of the third stage of labour, in which most of the deaths from haemorrhage took place, also received much attention. The routine use of oxytocic drugs before the delivery of the placenta was advocated in many centres.

The stillbirth rate similarly declined. In the U.S.A. it was 30·3 per 1,000 in 1940 and 20·6 per 1,000 in 1947.

TABLE I. MATERNAL MORTALITY IN VARIOUS COUNTRIES, 1940-1949
(deaths from maternal causes, including abortion, per 1,000 total births, live and still)

Country	1940	1942	1944	1946	1948	1949
England and Wales	2·68	2·48	1·93	1·43	1·01	0·97
Scotland	4·26	4·05	2·95	2·19	1·5	1·3
Northern Ireland*	4·22	2·96	3·07	2·32		
Australia*	4·08	3·59	2·85	1·85		
Belgium†	3·66	3·62	3·53	2·79	2·03	
Canada	3·90	2·93	2·67	1·76	1·44	
France‡	1·76	1·60	1·57			
Italy	2·13	1·71	?	1·61		
New Zealand	2·85	2·47	2·65	2·01		
Portugal	3·82	3·44	3·58	2·58	2·15	2·09
Sweden§	2·09	1·53	1·54	0·94	0·9	
U.S.A.	3·65	2·52	2·22	1·53		

* Rates per 1,000 live births. † Certain communes excluded 1940-42. ‡ Various changes in territory covered by data for 1944-46. § Own cause-of-death nomenclature. SOURCE: General Register Office, Somerset House, London.

Comparable figures for England and Wales were 36·1 per 1,000 in 1940 and 24·1 per 1,000 in 1947. This was attributed to better obstetric care of the mother during pregnancy and labour.

Further work was done on the conservative treatment of placenta praevia. C. H. G. Macafee of Belfast had recommended that an examination should be carried out in cases of suspected placenta praevia between the 37th and 40th week of pregnancy, except where there was severe haemorrhage (*Postgrad. Med. J., 25*, 297, London, 1949). New methods of treatment for eclampsia were also tried. Robert A. Hingson described the use of continuous caudal analgesia. Good results had been claimed for continuous spinal analgesia by P. J. McElrath *et al.* (*Am. J. Obst. Gyn., 58*, 084, St. Louis, Missouri, 1949). A dilute solution of posterior pituitary extract given by intravenous drip was successfully used for induction of labour and in cases of uterine inertia causing prolonged labour. The method was not found suitable for cases where there was contraction of the pelvis.

The practice of "rooming in" received extended trial in many maternity hospitals. This is an effort to establish a more natural relationship between the newly delivered mother and her baby. The baby remains with the mother throughout the day and night. The mother is encouraged from the beginning to do everything for her baby, instead of leaving this to the nursing staff. Favourable reports of this method came from the Yale University clinic. It was used in many hospitals in Great Britain and was being adopted in many others. The mother, it was claimed, was more confident in her management of the baby and the incidence of breast feeding increased. J. W. B. Douglas published an important paper on breast-feeding, based on a survey of all mothers delivered in a certain week in March 1946 in Great Britain (*J. Obst. Gyn. Br. Emp., 57*, 335, London, 1950). He showed that the incidence of breast feeding was higher in well-to-do mothers in the early months, but that the poorer mothers who succeeded in breast feeding their babies tended to continue to do so for longer than the well-to-do. There was a higher incidence of artificial feeding among mothers who attended welfare centres. There was no difference in mortality between breast-fed and artificially fed infants, but there was more diarrhoea and bronchitis among artificially fed infants.

TABLE II. FOETAL DEATH RATES IN VARIOUS COUNTRIES, 1940-1949
(stillbirths per 1,000 total births, live and still)

Country	1940	1942	1944	1946	1948	1949
England and Wales	36·1	33·0	27·7	27·2	23·2	22·7
Scotland	42·1	38·2	32·5	32·3	29·0	27·0
Belgium*	27·9	24·9	24·7	26·6	25·5	
Canada	26·4	25·5	23·0	21·1	19·3	
France†‡	31·4	26·5	26·5			
Italy‡	29·8	28·1	28·9	30·3	32·5	
New Zealand	28·6	25·9	23·2	21·8		
Portugal	45·0	45·3	44·1	42·3	42·8	40·7
Sweden	28·6	22·4	23·1	21·7		
U.S.A.§	30·3	25·0	23·9	22·3		

* Certain communes excluded 1940-43. † Including infants born alive but dying before registration of birth. ‡ Various changes in territory covered by data for 1944-46. § Stillbirths of all durations of gestation, 1940; stillbirths of over five months gestation, 1942 onwards. SOURCE: General Register Office, Somerset House, London.

Professor James Young presented a critical survey of the working of the maternity services under the national health service in Great Britain (*Am. J. Obst. Gyn., 60*, 226, St. Louis, 1950). He pointed out that three administrative bodies were responsible for maternity: local health authorities, responsible for midwives, clinics and health visitors; regional hospital boards and boards of governors of teaching hospitals, responsible for obstetric consultants; executive councils, responsible for general practitioners. There was lack of adequate co-ordination between these three bodies. Also the status of the midwife was in serious danger. *Maternity in Great Britain*, published in 1948, showed that in 1946 midwives were responsible for 72% of deliveries. The doctor might still attend his patient's confinement, though he was not obliged to do so unless there was some abnormality; but the patient tended to demand that the doctor should be present, thus relegating the status of the midwife to that of a maternity nurse.

Attention was given to the use of hormones for the treatment of repeated abortion. Articles appeared supporting the claims of progesterone given as a subcutaneous implant and also of the synthetic oestrogen stilboestrol given by mouth in increasing dosage throughout pregnancy. Others suggested that oestrogens and progesterone should both be given. Promising results were claimed from all three methods.

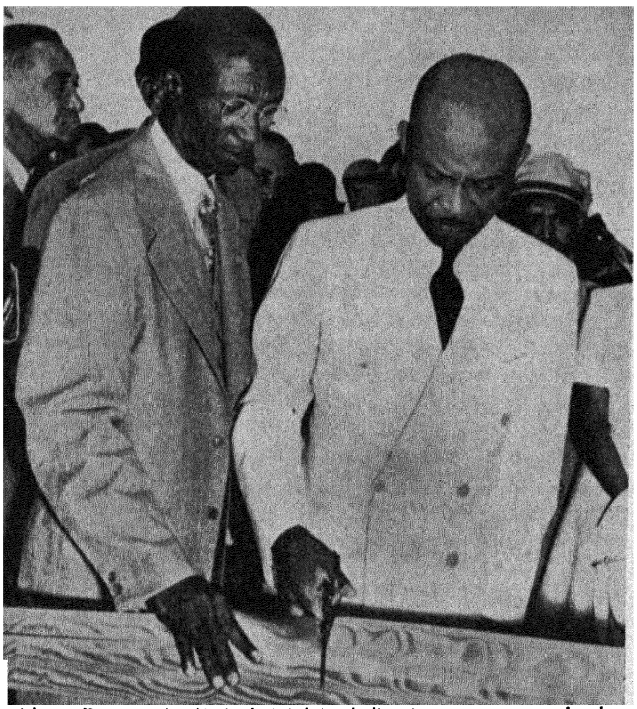
The problem of cancer of the female pelvic organs remained an oustanding one in gynaecology. Early diagnosis was of great importance, since it was in the early cases that the best results were obtained. In many clinics attempts were made to "screen" all patients over a certain age by means of the vaginal or cervical smear. The limitations of this method were made clear by J. E. and W. B. Ayre (*Am. J. Clin. Path., 19*, 770, Baltimore, Maryland, 1950). The vaginal smear could not be used as a basis for treatment in the absence of other confirmatory histological evidence; the work was time-consuming and exacting and there were not nearly enough trained cytologists; also, a proportion of false positives were found.

In the field of treatment, there was a general tendency towards more radical surgery. S. Way had described an extensive operation for the treatment of cancer of the vulva (*Proc. R. Soc. Med., 42*, 747, London, 1949). A. Brunchswig *et al.* described further experience with radical operations for extensive cancer of the uterus (*Am. J. Obst. Gyn., 59*, 237, St. Louis, 1950). The extended use of blood transfusion and antibiotics made possible extremely extensive procedures, sometimes involving extirpation of all the pelvic organs, including the uterus, bladder and rectum, such as could not have been contemplated even ten years before. Further progress along these lines could be expected.

BIBLIOGRAPHY. F. L. Adair and Edith Potter, *Foetal and Neonatal Death* (2nd ed., Chicago, 1949); Kenneth Bowes (ed.), *Modern Trends in Obstetrics and Gynaecology* (London, 1950). (J. Bs.)

HAITI. West Indian republic forming the western third of the island of Haiti or Hispaniola. Area: 10,748 sq.mi. Pop.: (1919 census) 1,631,250; (1949 est.) 3,750,000, of whom 95% are Negro and the remainder—the ruling class—almost exclusively mulatto. French is the official language, although a patois called *créole* is widely spoken. Roman Catholicism is the official religion, while voodooism is practised on a large scale in rural areas. Port-au-Prince (pop. est., 125,000) is the capital. Presidents in 1950, Dumarsais Estimé and, after Dec. 8, Paul E. Magloire.

History. Early in 1950 the tension between Dumarsais Estimé and various groups led to disorder. It appeared that



President Dumarsais Estimé (right) dedicating a new road, the "Harry S. Truman Boulevard," in Port-au-Prince, on Dec. 8, 1949.

various military and commercial groups were discontented because of the immense cost of the Bicentennial exhibition, which closed on June 8 and which threatened to engulf the financial resources of the country. The president was obliged to resign on May 10. Colonel Paul Magloire, head of the military committee which brought about the change, was elected president in October. A Constitutional Assembly was set up in Gonaives to revise the constitution. President Magloire took the oath on Dec. 8, with a cabinet of technicians. The new regime was primarily concerned with efficient reorganization of the country's economy. Prompt settlement of claims against the government was undertaken and foreign obligations were punctually met. Important public works were started in areas previously less favoured, such as harbour development, water and sewage systems at Cap Haïtien, a cadastral survey of the Artibonite valley and important roads.

The firm demand in world markets for sugar, coffee, sisal, cabinet woods and vegetable oils sustained Haiti's export trade during 1950 and went far toward paying for the increase in imports. The political unrest led to a brief disturbance in commercial and credit conditions; after the election, a substantial improvement was noted. The year witnessed the highest employment in Haitian history. (C. McG.)

Education. Schools (1949): primary 1,060, pupils 87,000; secondary 6 *lycées* and 15 private schools attended by about 10,000 pupils. There is a national University of Haiti.

Foreign Trade. Exports in the fiscal year 1949 (Oct. 1, 1948-Sept. 30, 1949) were U.S.$ 31 million and imports U.S.$ 31·4 million. Chief exports were coffee (43%), sisal (30%), bananas (6%) and sugar (5%); leading imports were cotton fabrics (14%), electrical machinery and apparatus (13%) and wheat flour (11%). Leading suppliers were the U.S. (77%), Netherlands Antilles (4%) and Canada (4%); leading customers, the U.S. (59%), Belgium (12%) and Italy (9%).

Finance. Budget (1950-51 est.) balanced at 105 million gourdes. Monetary unit: the *gourde* officially fixed at 20 U.S. cents.

(J. W. MW.)

HARBOURS: *see* DOCKS AND HARBOURS.

HARRIS, REGINALD HARGREAVES, British cyclist (b. Bury, Lancashire, 1920), began track racing in 1936, and in 1939 was selected as one of the British world championship team for the events in Italy. Because of the international situation the team returned without competing. Harris entered the army in 1940 and served in North Africa until 1944. While stationed in England in that year he won three national cycling championships and from then on was Britain's best sprint cyclist, being national sprint champion until 1948. In 1946 he reached the quarter-finals of the first postwar world amateur sprint championship and in 1947 at Paris he won the championship. In Aug. 1948 he failed to win the Olympic title at Herne Hill, London, being beaten by M. Ghella (Italy). In the same month he was again beaten by Ghella in the world championships in the Netherlands. Later in the same year he turned professional and after extensive winter and summer seasons won the professional sprint title at Copenhagen in Aug. 1949. Harris thus became the first Englishman to become professional sprint champion of the world. Two months later at Milan he set up a world's record for 1,000 m. standing start in 1 min. 9⅘ sec. In Aug. 1950 at Liége, Belgium, he again won the world's sprint championship. He was voted the "Sportsman of the Year" for 1949 and for 1950 in polls organized by *Sporting Record* (London).

HARTLEY, SIR HAROLD, British chemist (b. London, Sept. 3, 1878), was educated at Dulwich college and Balliol college, Oxford; he was natural science tutor and Bedford lecturer in physical chemistry at Balliol, 1901-31, Jowett fellow, 1928-31, research fellow, 1931-41, and honorary fellow from 1941. During World War I, he was an adviser on poison gases in France, and controller, Chemical Warfare department, Ministry of Munitions, 1918-19. His field of work then became that of the production and utilization of energy, and he was chairman of the Fuel Research board, 1932-47, and of both the international council and the British committee of the World Power conference from 1935. Elected a fellow of the Royal Society in 1926, he was knighted two years later and created K.C.V.O. in 1944. On Jan 6, 1950, he succeeded Sir John Russell as president of the British Association for the Advancement of Science. In his inaugural address on "Man's Use of Energy" at the 112th annual meeting of the association, at Birmingham on Aug. 30, the president spoke of the distribution of world energy reserves, pointing out that half of them were in the U.S. and the U.S.S.R. Remedies for this maldistribution were to be found in the international linking of national grid systems and the use of tidal energy; scientists had "a duty to posterity to pursue long-term researches" in the field of solar energy. Turning to nuclear energy, Sir Harold said that it would be a tragedy if the fear of competition from nuclear piles in any way retarded the development of more conventional power sources. On Sept. 2, Sir Harold received the degree of D.Sc. (*honoris causa*) from Birmingham university. Previously (April 27) Oxford university had conferred on him the honorary degree of D.C.L.

HATTA, MOHAMMED, Indonesian politician (b. Bukittinggi, Sumatra, Aug. 12, 1902). After elementary and secondary schooling in Padang and Batavia (Jakarta), he went in 1922 to Holland where he attended the Rotterdam High School of Economics and graduated ten years later. As a student he was a member of various nationalist students' associations and his political activities led to his arrest at The Hague in Sept. 1927, but he was released after six months. He returned to Indonesia where in 1934 he was interned by the Dutch authorities at Digul, and later at Bandaneira; in 1942 he was transferred to Sukabumi but soon afterwards was liberated by the Japanese. During the Japanese occupation, together with Ahmed Sukarno, Hatta was given

the opportunity of organizing the Indonesian Nationalist party, and on the declaration of independence on Aug. 17, 1945, he became vice president of the republic of Indonesia. In Jan. 1948 he was made premier and minister of defence; on Dec. 19 he was one of the republican cabinet members overtaken by the second Dutch police action at Jogjakarta and was once more interned. When the republican government was restored on July 6, 1949, Hatta resumed the premiership. He attended the round table conference, opened at The Hague on Aug. 23, as chairman of the republican delegation and on Dec. 15 was appointed premier of the first cabinet of the United States of Indonesia. He resigned after the Representative Assembly had approved on Aug. 14, 1950, the unitary republican constitution. On Oct. 14, 1950, he was elected vice president of the republic of Indonesia.

HAUTE VOLTA: *see* FRENCH WEST AFRICA.

HAWAII. United States territory, eight large islands and numerous islets in the Pacific ocean. It includes Midway, with an archipelago of rocks, reefs and shoals, and Palmyra, a coral atoll of 55 islets. Total area of group: 6,433 sq.mi. Largest island, Hawaii (area, 4,021 sq.mi.) Total pop.: (1940) 423,330; (1950) 499,794. The largest single racial group is Japanese (39·5% of the total); next, white or Caucasian (27·5%); third, the Hawaiians and part-Hawaiians (19·3%). Capital, Honolulu, on the island of Oahu (pop., 1950 est., 232,193 exclusive of military and naval personnel). Governor, Ingram M. Stainback.

History. A statehood convention was held in April 1950, attended by delegates from all the islands. The constitution drafted at this convention was approved by the voters in the general election of 1950, following approval by the Territorial Legislature. In Dec. 1950 copies of the constitution were formally presented to President Harry S. Truman and to both houses of congress by the governor of Hawaii. A statehood enabling bill failed to pass the U.S. Senate and immediate steps were made by the territory to carry its fight for statehood to the next congress.

Economy and Finance. (1949-50) production: sugar 995,890 short tons ($112·3 million); pineapple and juice 23·7 million cases ($75 million); coffee (green) 6 million lb. ($1·7 million). Hawaii purchased from the U.S. in 1949 merchandise valued at $307·6 million and shipped to the mainland products valued at $212·5 million. Total territorial tax collections (1949-50) $160·6 million ($163·8 million in 1948). Net bonded indebtedness $19·4 million. Net assessed valuation of real property $333·6 million. Internal revenue collections (1949-50) $81·1 million. (I. M. S.)

HEART DISEASES. The National Conference of Cardiovascular Diseases was held in Washington from Jan. 18 to 20; and the first International Congress of Cardiology in Paris from Sept. 3 to 9, 1,200 physicians attending. At this congress the International Society of Cardiology was formed.

The psychogenic factors of essential hypertension were pointed out, and the role of the adrenal re-emphasized by subtotal, and even total, adrenalectomy which became feasible through the replacement possibilities of Cortisone, and pituitary adrenocorticotropic hormone (ACTH). A. M. Master, L. I. Dublin and H. H. Marks suggested a redefinition of hypertension since, at ages 55 or 60 and older, systolic pressure of 180 mm. or even to 190 mm., and diastolic pressure of 100 mm. or even 110 mm. should not *ipso facto* be considered abnormal.

The development of atherosclerotic coronary disease in people under the age of 40 was shown to be confined almost entirely to the male sex, and to the predominantly mesomorphic type. J. W. Gofman and his associates demonstrated that people prone to atherosclerosis showed a significant increase, in their blood sera, of giant lipid and lipoprotein molecules of low density, as shown by flotation rates in the ultracentrifuge.

Progress in congenital heart disease studies concerned the increased accuracy of diagnosis, especially by the use of the intracardiac catheter, or the intra-arterial catheter and retrograde arteriography, as in the visualization by X-ray of coarctation of the aorta. Helen B. Taussig reported 828 patients operated on for pulmonary stenosis and atresia. Of these 164 had died but more than 80% of the patients with tetralogy of Fallot who were benefited were doing well six months to five years after operation. Pulmonary stenosis became amenable to surgery upon the valve or infundibulum of the right ventricle. Relief of coarctation of the aorta by surgery was extended by the use of arterial grafts.

Successful operations upon the stenosed mitral valve were performed. In France it was found possible to remove the entire endothelial lining of the arteries of the legs from groin to ankle in cases with a high degree of arteriosclerotic occlusion of these vessels and to restore circulation, even at times to limbs with gangrene. M. Prinzmetal and his associates presented evidence that the same basic mechanism exists in auricular premature beats, auricular paroxysmal tachycardia, auricular flutter and auricular fibrillation, that is, a single ectopic focus in the auricle, thus denying the earlier concepts of Sir Thomas Lewis regarding a circus movement in auricular flutter and fibrillation.

Investigative instrumentation was extended by the development of a small, portable, ballistocardiograph by William Dock, and this technique became rapidly explored in clinical medicine, using this instrument as well as the table models of Starr and Nickerson. Intracardiac investigation in man progressed to the point of introduction of a catheter into the left ventricle and even into the left auricle, in one subject, where electrocardiograms were recorded. (H. B. S.)

HEAVY ENGINEERING. Although few of the individual projects in the engineering world that were completed in 1950 would be ranked as of outstanding importance, the technical and economic trends of the year were in some directions quite strongly marked. In heavy constructional work on schemes for the exploitation of water power some of the tendencies were the extension of multi-purpose programmes of river development, the persistent increase in the size of generating sets and the inauguration of plants for peak load operation in combined power systems.

One of the best examples of the rapid development of water resources was in Canada where three new hydro-electric stations were opened in Ontario in the summer, the Tunnel scheme on the Mississagi river, Pine Portage on the Nipigon and the Des Joachims station on the Ottawa. By the end of the year these installations had added nearly half a million horse power to the power resources of Ontario. In Great Britain the principal event was the opening of the Loch Sloy plant, the first major unit in the great programme of the North of Scotland Hydro Electric board. The works comprised a high head development, with a maximum height of 910 ft., consisting of a gravity buttress dam whence the water was led to the power house by a tunnel nearly two miles long. Four main Francis turbine sets each of 32·5 megowatts were installed. The installation provided for a normal production of about 120 million units a year and was designed for peak load operation to supplement supplies from thermal stations in southern Scotland.

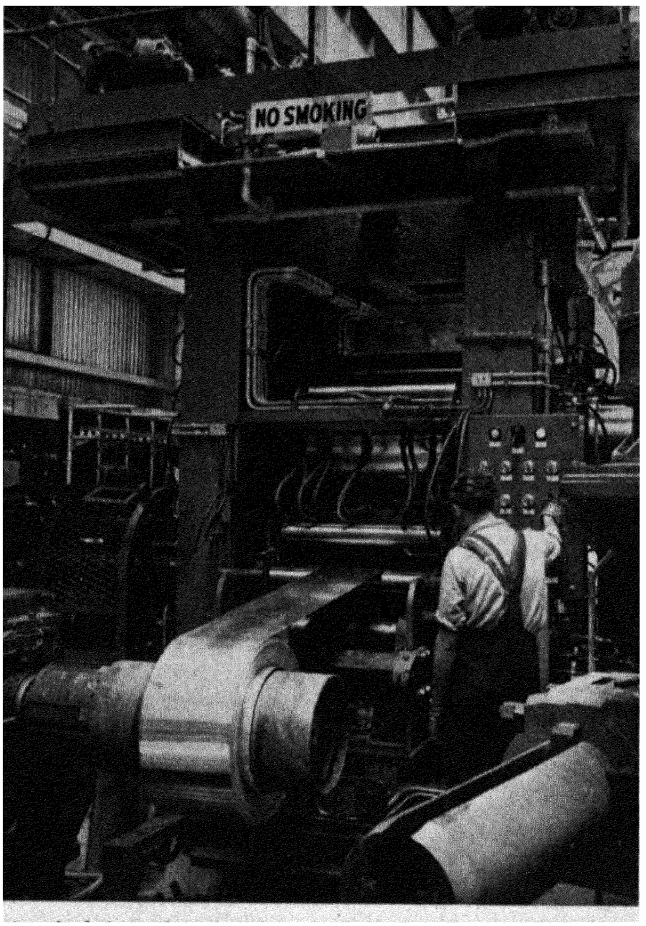
The resources of most European countries were still largely devoted to reconstruction and replacement of war-damaged structures, but in France pioneer work of some significance in pre-stressed concrete was accomplished, in particular the completion of a reservoir at Orleans constructed

on this principle. It was also adopted for a number of factories and similar buildings in Britain, in several instances in combination with light alloy roof members. Post tensioning as the appropriate means of applying the stress in all heavy work of this kind was generally accepted and a great extension of the process in civil engineering work of all kinds was foreshadowed. The year also provided an excellent example of the potential competitive power of aluminium light alloys as an economic alternative to steel in the largest structures. At Arvida in Quebec what was claimed to be the first highway bridge of light metal on the American continent was completed. It comprised a main span of 290 ft. and an approach span giving a total length of 504 ft. and in conformity with recent practice was constructed with cold driven aluminium alloy rivets. While no similar bridge was actually finished in Britain advances in the technique were shown by other ventures in the field of civil engineering. Among them the construction of tensioned sluice gates for controlling the flow of a river 75 ft. wide was typical of the lines along which designers were beginning to work.

Consideration of thermal power stations built during the year must include a primary reference to the Philip Sporn generating plant in the U.S. Check runs in the early months of 1950 showed that the remarkable figure of 36·77% was obtained for the thermal efficiency on a send-out basis. Boilers producing steam at a pressure of 2,300 lb./sq.in. and a temperature of 1,050°F. represented practice well in advance of that achieved in any other country. Urgently needed extra generating capacity, however, did not prevent the British Electricity authority from tabulating, at the British Electric Power convention held in July, a programme in which although 90% of the new plant was scheduled to follow proved practice the remainder was to be designed on non-standard lines in which pressures up to 1,500 lb./sq.in. and temperatures as high as 1,250°F. were to be included.

Five new installations were completed during the year and the Stourport B station in particular illustrated the practical steps taken to implement this policy. It included the first slag-tap furnace in Great Britain where the coal ash was removed in the molten condition, initial steam conditions at the turbine of 1,250 lb./sq.in. and 950°F. and boilers with evaporative capacities of over 500,000 lb./hr. Another feature of this plant was the hydrogen-cooled main alternator working at a pressure of 0·5 lb./sq.in. but with provision for an increased working pressure of 15 lb./sq.in. It represented the second machine of this type installed in Britain and was regarded as an index of an intended expansion in the application of this class of equipment. Design and construction tended to follow the combination of one turbine to one boiler and the new plants generally were characterized by the wide provision of instruments for indicating and recording operating conditions, particularly by electronic means.

The heavy electrical engineering industry was fully employed throughout the year in fulfilling heavy orders for standard equipment of all kinds and British manufacturers supplied large quantities of machines for export. Although an attempt on their part to tender for heavy transformers in the U.S. was unsuccessful the prices disclosed that manufacture in the United Kingdom was cheaper. A notable event in Britain in the electrical world was the establishment of experimental facilities for a 40-mi. section of a super grid to reinforce the existing national 132-kv. system. The working length operated at a nominal pressure of 275 kv. but ultimate extension to 380-400 kv. in certain sections was foreseen. Although the research sponsored by the British Electricity authority had begun in Nov. 1949 in its laboratories the bulk of the experimental work was carried out during 1950. On the continent of Europe 400 kv. was used for the transmission of current from the north of Sweden to the industrial areas in the south, and Swedish engineers also began the installation of the first high-tension direct current transmission in the world between the mainland and the island of Gotland, a distance of over 62 mi. In France a testing station capable of handling circuit breakers and other plant directly on a 220-kv. network was established.



A coil of sheet aluminium being rolled to the required hardness at the factory of the Northern Aluminium company, Rogerstone, near Newport, which was opened in Sept. 1950.

Experience in the operation of gas turbines as prime movers for industrial service had already suggested that their more immediate application was as stand-by or emergency units for peak load supplies. Much discussion was recorded in engineering circles on the difficulties encountered in burning heavy residual oil as the fuel because turbine blades were badly corroded by its small content of vanadium oxide. Few important advances in the technique of using powdered coal were reported and the attention of designers was concentrated largely on the open-cycle type of turbine with an axial compressor. Much research was directed to the sweat cooling of blades and the possibilities of handling a range of fuels, particularly peat.

One British firm of engineers exhibited early in the year an open-cycle machine with an output on a continuous full power rating of 1,070 b.h.p. which had been built as a private venture and installed, coupled to an electric generator of 750 kw., in the company's own power house. The plant included an axial compressor and tubular heat exchanger and the turbine blades were cooled by means of an air film bled from the interstage of the compressor. Discussion on this subject at the Fourth World Power conference in August emphasized the general preference of designers up to that time for open-cycle designs and the degree to which the future of the industrial gas turbine was linked with the ability to work on cheap fuels.

The well-established popularity of heavy oil engines for stationary service of all kinds continued to be evident in the orders placed with leading manufacturers in both Europe and the U.S. Among the particular tendencies discernible, especially in British engines, were the growing interest in dual fuel engines for operation on sludge gas in sewage works, on town gas for booster drive in gas works and on natural gas for service in oil fields and elsewhere. Vee-form engines of heavy and medium powers, particularly for railway and transport work, were more extensively adopted and the growing application of pressure charging by means of the increasing number of exhaust turbo-pressure chargers of British manufacture available was to be noted.

For marine propulsion, while little change was observed in standard designs, a new 7,500 b.h.p. opposed single acting piston was completed as the first of a series to be installed in a number of tankers and several important British makers supplied engines of both two-stroke and four-stroke types, in the range 1,000-2,000 b.h.p. and higher powers for coastal vessels, trawlers and similar craft. This policy was regarded as a testimony to the reliability that engines of this class had reached, as, although owners had long appreciated the fuel economy obtainable from the high efficiencies achieved, the main consideration in the adoption of oil engines was the low maintenance costs which could be guaranteed. Among these installations was an 1,100-b.h.p. engine in the largest trawler built in Great Britain.

Shipbuilding throughout the year, particularly in Britain, was notable for the changes which occurred in the type of construction in hand at various periods rather than for novelty of construction or technical changes. Typical of the change towards vessels of larger capacity, a 28,000-ton vessel constructed for an important oil company was fitted with geared turbines developing 13,000 s.h.p. to give a service speed of 15 knots. This ship was also an example of the general progress made in the application of welded construction to the hulls of large vessels as well as to superstructures as riveting was applied only to a small extent in the hull.

Long term plans for expansion and re-equipment of the metallurgical industries were pressed forward in many European countries. In Britain the steel industry's postwar scheme of expansion was taken a further stage by the completion of a continuous billet mill for an important company operating in the midland ore field. The plant consisted of a 42-in. blooming mill feeding a six-stand rolling mill and the whole unit had a capacity of 500,000 tons of steel a year. Advances in practice in this class of equipment were shown by the reduced maintenance time achieved for which a figure of 0·2% of the rolling time was quoted. A system for the continuous removal of scale and a means of automatic lubrication of all bearings were other features of the design. In France one of four continuous strip mills ultimately to be installed in the Moselle iron ore area went into service. Intended to secure the needs of French consumers for steel sheet this first plant was a pointer to the general growth in capacity which characterized the steel industry in Europe. It was built to handle ingots of from 9 to 14 tons and produce continuous lengths of strip as thin as 0·4 mm. Much of the equipment for the finishing sections in this class of work was of U.S. origin or design. Much similar equipment was supplied to other countries, notably Sweden which purchased modern rolling plant of British manufacture during the year.

An important event in the expansion of facilities in Britain for the production of non-ferrous metals was the entry into service of a new continuous strip mill for the production of aluminium and light metal alloy sheet in south Wales. This plant combined British and U.S. practice in that the hot rolling mill for reducing the 4,000-lb. ingots and the intermediate hot mills were British and the cold rolling mills partly British and partly American. A sidelight was thrown on manufacturing policy in this section of heavy industry by the arrangements for the supply of raw materials. The plant was built to use ingots imported from Canada, but low-frequency electric melting equipment was installed to handle scrap.

In both production and fabrication heavy engineering manufacturers tended to demand and designers to supply new and often highly successful machine tools for special purposes. Examples were a combined machine for drawing, cutting and straightening non-ferrous rod, a double-ended boring machine for boring boiler tube drums, heavy presses for general engineering and for powdered metals, plastics, plywood and similar compositions while notable progress was made in heavy handling equipment for iron and steel works, shipyards and contractors' work of all kinds.

Perhaps the outstanding impression of the activities actually brought to completion during 1950 was the steady progress in the re-equipment of the basic industries and the steps taken, particularly in Great Britain, to produce heavy plant to designs based on successful American experience or developed in response to the need observed by manufacturers of primary products. (W. As.)

HELSINKI (HELSINGFORS). Capital and largest city of Finland. Pop.: (1940 est.) 319,939, (1950 est.) 400,000. President of the municipal council, Eero Rydman.

History. Principal festivities marking the 400th anniversary of the founding of Helsinki were held on June 11-13. These included the unveiling of a memorial to King Gustaf Vasa, the founder; the opening of the new Gustaf Vasa road; the opening of an exhibition depicting the history of the city; a parade showing important events through the centuries, and a concert at the University concert hall.

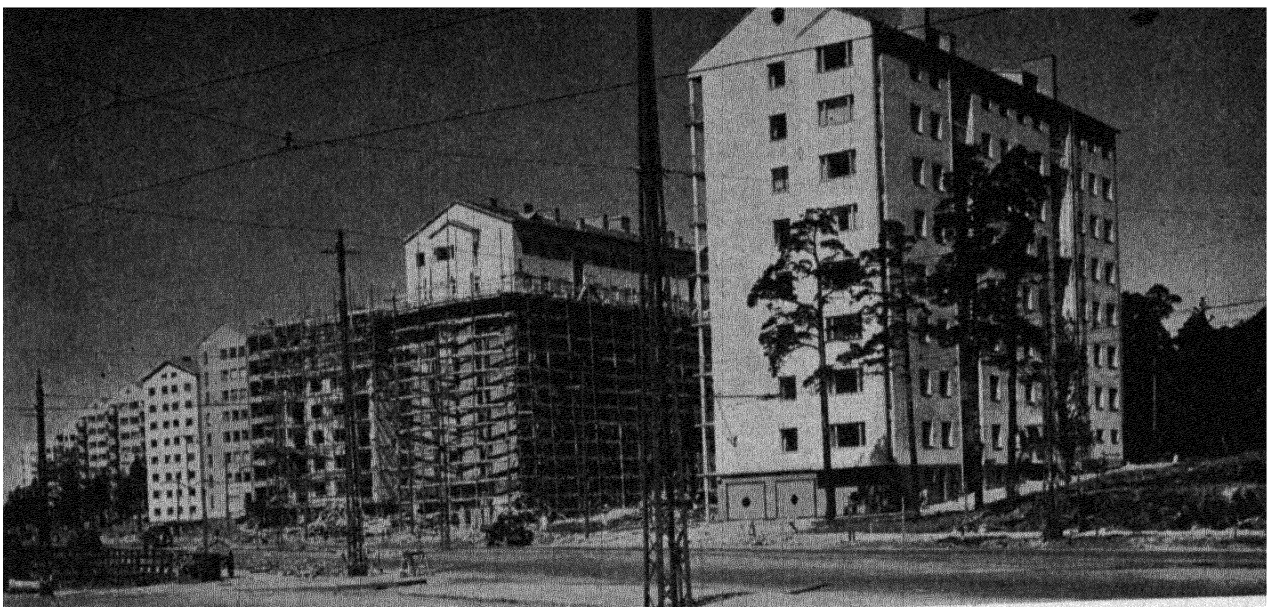
Helsinki was in 1950 the scene of various important Scandinavian conferences, such as the Theatre congress and the Agricultural Scientists' congress in June; Scandinavian philologists, chemists and gynaecologists met in August. The British Boyd Neel orchestra and a large number of world-famous musicians visited the capital during the year. On Dec. 8 a jubilee concert was given on the occasion of the 85th birthday of Jean Sibelius.

The *Suomen Messut* (Finnish fair) celebrated its 30th anniversary by arranging a great national industrial exhibition from Sept. 30 to Oct. 15. Some 600 exhibitors took part in this inspection, the largest so far, of Finland's production.

Helsinki heralded the beginning of its fifth century by preparing for the 15th Olympic games. The stands of the stadium were enlarged to hold 70,000 spectators. An Olympic village would give shelter to 5,000 competitors. In autumn 1950 the organizing committee of the Olympic Games of 1952 appealed to citizens of Helsinki to place their private flats at the disposal of foreign visitors, as the majority of them could not be accommodated at hotels. A special committee was preparing facilities for railway, postal telephone and telegraphic services.

The real impact of 80,000 Finnish workers on strike in Sept.-Oct. 1950 did not make itself felt in the life of the capital. A few dozen lifts out of commission and about a thousand mute telephones caused, however, some annoyance. The general strike called for Oct. 22 was warded off as had been that planned for May. Government decrees raised butter prices by 20% and milk prices by 15% and rents went up by from 5% to 25%.

Budget. The city's revenue and expenditure in 1950 balanced at Fmk. 9.524 million. The most important items in expenditure were (Fmk. million): medical service 979, education 737, public works 665, general administration 512, relief service 446 and courts of justice and police 293. (A. VAR.)



New flats being erected in Helsinki in 1950 the year which saw the 400th anniversary of the founding of the city.

HEMP. Manufacturers in Britain had been almost completely cut off from dollar area supplies of hemp since the commodity was controlled in 1949. Spinners had been compelled to buy most of their needs in the Indian or Italian market or to substitute east African sisal. The Italian hemp crop in 1950, estimated at 700,000 quintals, was the lowest for some years; it was considered, however, to be the best in quality that had ever been grown in Italy and to be approached only by a crop grown in 1927. Prices caused some concern to the Italian growers who pointed out that their fixed price of 26,500 lire a quintal was only 47 times the prewar lira price while competing fibres were selling at much higher comparative prices: raw jute, for example, was costing the Italian buyer more than 100 times the 1938 lira price. The U.S. continued to buy for stockpiling and prices in the world markets continued at relatively higher levels than those of other textile fibres, mainly because of the lower crop yields.

Italian export prices on Oct. 30, 1950, in lire a quintal (in lire per 100 kg. shown in brackets) were: mechanically combed hemp, extra 59,300 (61,000), good quality 53,100 (55,000); mechanically combed tow, extra 29,500 (31,000), good quality 27,750 (29,000); carded hemp, special spinning 22,400 (23,600); and Scottish prima 56,600 (58,500), second quality 54,800 (56,600). (*See* also JUTE.) (G. Hs.)

HENCH, PHILIP SHOWALTER. American physician (b. Pittsburgh, Pennsylvania, Feb. 28, 1896), was educated at Lafayette college and at the University of Pittsburgh, where he received his M.D. degree in 1920. He entered the Mayo foundation, Rochester, Minnesota, as a fellow in medicine in 1921 and was appointed first assistant in medicine in 1923 and associate in the Division of Medicine in 1925. During 1928 and 1929 he was engaged in post-graduate studies at Freiburg and Munich. He served as a colonel in the U.S. Army Medical Corps during World War II. In 1950 he was consultant and head of the section on rheumatic diseases at the Mayo clinic (since 1926), professor of medicine in the Mayo foundation and consulting physician to St. Mary's hospital, Rochester. The Royal Swedish Academy of Science awarded the 1950 Nobel prize for medicine jointly to E. C. Kendall, to T. Reichstein (*qq.v.*) and to Hench " for their discoveries concerning the suprarenal cortex hormones, their structures and biological effects." As early as 1925 Hench had formed the theory that the suprarenal glands might somehow be involved in the rheumatic diseases, and he published many papers dealing with his researches. In 1935 Kendall, a colleague of Hench's at the Mayo clinic, had isolated a number of steroids from the cortex of the suprarenal glands; and early in 1949 Hench, Kendall and their collaborators carried out the first trials of Compound E or Cortisone in the treatment of rheumatic arthritis, with brilliantly successful results. The Mayo clinic workers also found that ACTH, a hormone produced by the pituitary gland at the base of the brain, also had a profound effect on arthritis, apparently by stirring up the suprarenal glands to produce other hormones, including Cortisone. (W. J. BP.)

HIRE PURCHASE: *see* CONSUMER CREDIT.

HISTORICAL RESEARCH. The focal point of the year's activities was the ninth International Congress of Historical Sciences held in Paris at the Sorbonne from Aug. 28 to Sept. 3. This first plenary conference since World War II was attended by over 1,400 delegates from 32 countries. The experiment was tried of printing beforehand a volume of *Rapports* on various fields of study (anthropology and demography, economic history, the history of institutions, and so on). These reports were discussed at the morning sessions, and short papers—263 in all—at sectional meetings in the afternoons. The *Actes* of the congress were published afterwards in a second volume. A number of new commissions were set up by the congress, notably one to prepare a conspectus of works on palaeography. The commission on bibliography was active during the year, having brought out the 1948 volume of the *International Bibliography of Historical Sciences* (Paris) soon after the 1947 one, leaving the wartime gap 1940-46 to be filled later. The historical congress was preceded in Paris by one on archives and succeeded by one on Slavonic studies. Other delegates went on to a well-run conference on " The History of World War II in the West," held at Amsterdam in September under the auspices of the Netherlands State Institute for War Documentation. There was also the sixth International Conference on the History of Science at Amsterdam during August.

Apart from Great Britain the most productive countries in Europe were France and Italy. In France the second volume of the *Bibliographie générale des travaux historiques et archéologiques publiés par les sociétés savantes de la France* carried this useful guide half-way towards completion. Notable monographs appearing during the years were: Claude de Bonnault, *Histoire du Canada français, 1534-1736* (Paris) in the big series "Colonies et Empires"; J. Droz, *L'Allemagne et la révolution française* (Paris); and Félix Ponteil, *La Monarchie parlementaire 1815-1848* (Paris). In Italy the first two volumes appeared of the *Catalogo dei statuti* (Rome), a great catalogue of statutes, customs, laws, decrees, ordinances and privileges of the provinces, towns, villages, castles and other communities, from the middle ages to the end of the 16th century. Important Italian monographs published on recent history included G. Natale's *Giolitti e gli Italiani* (Rome), with a commendatory preface by Benedetto Croce. The scholarly periodical *Studi medievali* (Turin) resumed publication with a volume for 1943-49 and two parts for 1950. In Spain and Portugal the editing or re-editing of texts continued actively, particularly those of mediaeval chronicles and voyages of discovery. Outstanding Spanish publications were E. Lévi-Provençal's *España musulmana* (translated by E. García Gómez), Ramón Menéndez Pidal's *El Imperio hispánico y los cinco reinos* and J. M. Doussinague's *El Testamento político de Fernando el Católico*. In London English translations appeared of R. Altamira's classic *History of Spain* and of Ramón Menéndez Pidal's *The Spaniards in their History*.

In Germany historical studies were reviving rapidly. Further volumes were issued in the series of *Monumenta Germaniae Historica*, now permanently established at Munich. From the same office two well-known scholars, F. Baethger and W. Holtzmann, restarted a famous journal, the *Deutsches Archiv für Erforschung des Mittelalters*, founded 100 years ago. Another German periodical to reappear was the *Historisches Jahrbuch* (Cologne), and a new yearbook "for universal history" started under the title *Saeculum* (Scheyern, Bavaria). In Holland may be noted the resumption of the great "R.G.P." series (*Riks Geschiedenis Publicatien*), of which the fourth and concluding volume, on "Sources for the history of Dutch trade with England, Scotland and Ireland, from 1150 to 1585," appeared at The Hague. In Belgium, the Académie Royale resumed publication of the *Catalogue général des manuscrits* (Brussels), with a descriptive list of those at Tournai.

In eastern Europe historical scholarship was almost dead—the comparatively objective *Annales d'histoire du droit* (Poznań) and *Revue d'histoire comparée* (Budapest) having been suppressed. In place of the latter, the reconstituted Danubian institute started *Acta historica* (Budapest), one of a series of journals emanating from the same source and directed towards the same political purpose. In the U.S.S.R. the "five-year plan for history" ended with inevitable failure, although there was considerable publication of a sort. Works of value from Moscow which managed to escape indoctrination included vol. 25 of the *Complete Collection of Russian Chronicles*, sponsored by the historical institute of the Academy of Sciences; A. Yakovlev's edition of *Customs Returns in the 17th Century;* and N. Falkovsky's *Moscow in the History of Technics*, which covered rather more than the title suggests.

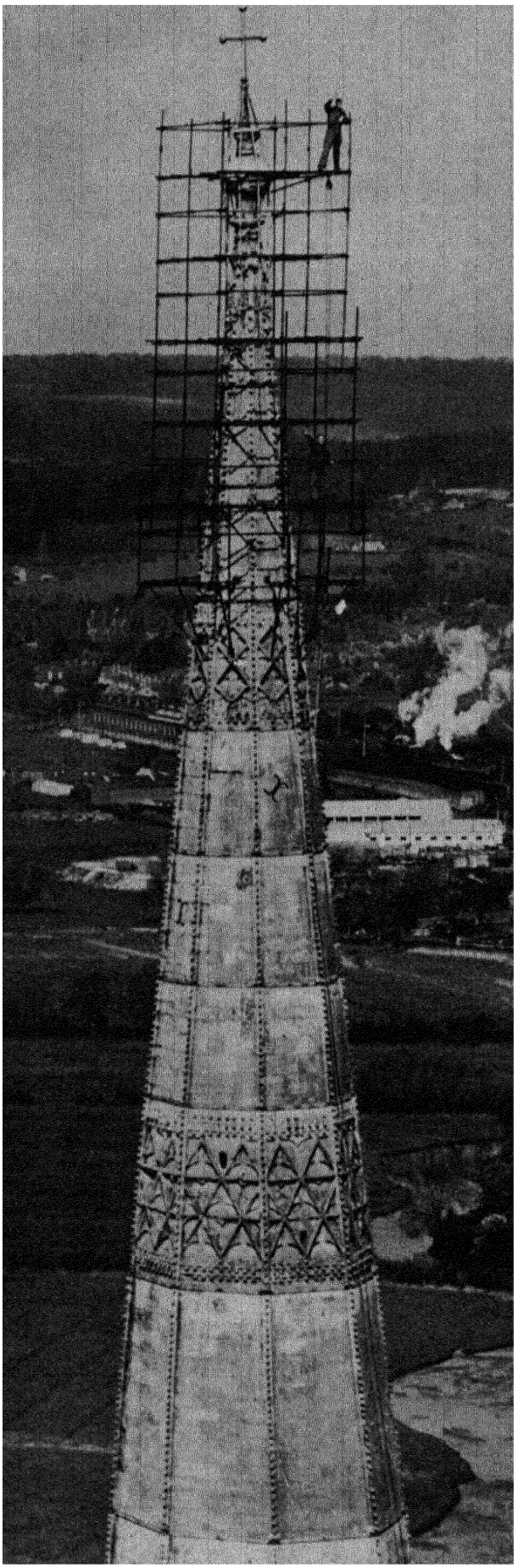
Of considerable importance for the early history of south-eastern Europe was a scheme launched in Britain and France to record the "prosography" of the later Roman empire. Two committees, of the British Academy and of the French Institute of Byzantine Studies, planned to list the names of governing classes, both pagan and Christian, from about A.D. 264 to 700. Among British publications on the middle ages may be mentioned vol. iv of F. S. Schmitt's edition of St. Anselm's *Opera Omnia* (London). An important new English periodical, the *Journal of Ecclesiastical History* (London), was started under the direction of an international committee. In the modern period two works of general interest were K. Feiling's *History of England* (London) from the conservative viewpoint and C. E. Carrington's *The British Overseas* (London), hailed as the best single-volume treatment of the subject for many years. W Croft Dickinson produced in two sumptuous volumes what seemed sure to become the standard edition of John Knox's *History of the Reformation* (Edinburgh). G. J. Renier, professor of Dutch history in the University of London, made a highly original contribution to study in his *History: its Purpose and Method* (London).

The United States followed Britain in setting up the National Trust for Historic Preservation. One of numerous enterprises to reach a successful conclusion was the joint production of American and British scholars, *The English Government at Work, 1327-1336* (Cambridge, Massachusetts), sponsored by the Medieval Academy of America: vol. iii concerned "Local Administration and Justice" during this formative period. A much larger enterprise began in the modern field with vol. i of a truly monumental edition of *The Papers of Thomas Jefferson*, to be completed in 52 vol. by a special staff at Princeton university. An illustrated magazine, on the lines of the *National Geographic Magazine*, was started by the American Association for State and Local History, under the title *American Heritage* (Montpelier, Vermont) The papers of the first Congress of Historians of Mexico and the U.S., held at Monterrey in 1949, were published during 1950. They contained several addresses of significance on the preservation and organization of records, on teaching methods and on the philosophy of history. An important new Brazilian periodical was the *Revista da Historia* of São Paulo, the first number of which contained an article on mediaeval England.

The enormous task of digesting the mass of documents on World War II was carried a few stages further with the publication of new volumes in the various series: vol. 3 of series D of the captured *Documents on German Foreign Policy, 1918-1945* (London); vol. 4 of series 2 and vol. 3 of series 3 of *British Documents on Foreign Policy* (London), on the years 1932-33 and 1938-39; vol. 2 of the United Kingdom civil series of the Official History of the War, dealing with *Problems of Social Policy* (London). Two volumes of the official *History of U.S. Navy Operations in the Pacific* appeared, vol. 4 dealing with the battles of *The Coral Sea*, vol. 5 with *The Struggle for Guadalcanal*. Among the spate of reminiscences, confessions and justifications may be mentioned vol. 3 of Winston Churchill's *The Second World War* (London); R. Coulondre's *De Staline à Hitler, souvenirs de deux ambassades, 1936-39* (Paris); Ernst von Weizsäcker's disappointing *Erinnerungen* (Munich); and L. C. Moyzisch's *Operation Cicero* (London), a highly coloured account of spying in Istanbul. L. B. Namier added further studies of *Europe in Decay, 1936-40* (London) to his *Diplomatic Prelude*, and a second edition appeared of H. R. Trevor-Roper's analysis of *The Last Days of Hitler* (London). The most scholarly account of recent events was H. Seton-Watson's *The East European Revolution* (London).

In December it was announced that the National Maritime museum, Greenwich, London, had acquired a volume of 16th- and 17th-century documents from Sir Thomas Phillips's library, including three previously unknown autograph letters from Philip II to Medina-Sidonia, commander in chief of the Armada. (A. T. ME.)

HISTORIC BUILDINGS. In Dec. 1948 the chancellor of the exchequer appointed a committee under Sir



Ernest Gowers with the following terms of reference: " To consider and report what general arrangements might be made by the Government for the preservation, maintenance and use of houses of outstanding historic or architectural interest which might otherwise not be preserved, including where desirable, the preservation of a house and its contents as a unity."

The committee, reporting on March 30, 1950, recommended that " Historic Buildings councils "—one for England and Wales, another for Scotland—should be set up. These councils would be both administrative and advisory, and would use powers already exercised by the Ministry of Works and the Ministry of Town and Country Planning. The councils would compile, beside the general list already being made under the Town and Country Planning acts, a list of " designated " houses—those of such outstanding merit that their preservation under the supervision of the councils was essential. Owners of designated houses would receive certain tax reliefs, and the councils would be able to make grants for the repair and upkeep of such houses and, if necessary, to purchase them.

In the House of Commons in July, an opposition amendment to the Finance act, 1930, to exempt historic houses from estate duty, was withdrawn after Sir Stafford Cripps had indicated that the government did not wish to make a decision about the historic buildings problem until they had seen " the reactions of different sections of the population " to the Gowers report. By the end of the year, no further announcement of the government's intentions had been made.

Between July 5 and Dec. 5, £30,000 was spent in rebuilding the top 25 ft. and repairing the next 35 ft. of the 14th-century spire of Salisbury cathedral (main fabric built 1220-1266), a building which needed constant attention due to the overloading of its flint foundations. The Pilgrim trust gave £10,000 towards the cost of the work. In June an urgent appeal was made for £250,000 for major repairs to York minster (built 13th-15th centuries), where the stonework of the west front, the pinnacles of the west towers, and such features as gargoyles and merlons had decayed considerably; the roof-timbers of the unique octagonal chapter house (built *c.* 1290) had been attacked by deathwatch beetles. The setting up in March of a cathedrals' advisory committee of the Central Council for the Care of Churches made technical advice available to cathedral chapters from within the church organization.

A serious loss among smaller churches occured in February when Tettenhall church, Staffordshire (early 13th century), was gutted by fire. It was announced that St. John's church, Waterloo Road, London (F. Bedford, 1823-24), undergoing war-damage repairs in 1950, would be used as the official church of the 1951 Festival of Britain.

The annual report of the National Buildings record showed that the demolition, despite legislative safeguards, of many historic buildings was taking place. Among such demolitions going forward in 1950 were those of the main block of Woburn abbey, Bedfordshire (Henry Flitcroft, 1745-50), and of East Cowes castle, Isle of Wight, built by John Nash for his own use.

Aside from demolition, there was the ever-present danger of old buildings of merit being out-scaled or hidden by unsuitable new structures. Some anxiety was felt in this connection when it was learned during the year that a large student hostel would be built in Mecklenburgh square, London, the east side of which was a formal stuccoed terrace of some distinction by Joseph Kay (1812), and that a proposed heightening of buildings in Carlton House terrace would over-shadow the Nash façades (1827-32) in the Mall.

Men at work on the spire of Salisbury cathedral in 1950 when the top 60 ft. of the spire was restored.

During the year the restoration of the Egyptian hall of the Mansion House, London (George Dance the elder, 1739-53), was completed, and a number of the Nash terraces (1820-27) surrounding Regent's park shed their scaffolding, although there was a good deal of criticism that the Ministry of Works had failed to replace many capitals and other enrichments.

Among historic houses opened to the public during 1950 were: Blenheim palace, Woodstock, Oxfordshire (by Sir John Vanbrugh, 1705); the partly restored Seaton Delaval, Northumberland (Vanbrugh, 1720-28); Kenwood, Hampstead (apsidal library, south façade, north portico, etc., by Robert Adam, 1767); Luton Hoo (façade by Robert Adam, grounds by "Capability" Brown); and Ham house (built 1610; altered in the late 17th-century), as a branch of the Victoria and Albert museum. In June the Brighton corporation celebrated the centenary of public ownership of the Royal Pavilion (John Nash, 1815-20) by opening to the public the state apartments, furnished to illustrate various aspects of Regency taste.

In October the death occurred of Sir Alfred Clapham, the eminent student of Romanesque architecture (*see* OBITUARIES).

HIVES, ERNEST WALTER HIVES, 1st Baron, of Duffield, Derbyshire, British engineer and industrialist (b. Reading, Berkshire, April 21, 1886), was educated at Redlands school, Reading. In 1908 he joined Rolls-Royce, Ltd. He rose to the position of managing director and in Oct. 1950 he was elected chairman. He developed the Rolls-Merlin engine which was used in the Hurricane, Spitfire and Lancaster aircraft and also in the American Mustang. During World War II he was responsible also for the manufacture of a large number of tank engines. Under his supervision his firm became one of the foremost makers of jet engines, among the best known being the Derwent, Avon, Tay and Nene and the Trent, Clyde and Dart turbine-propeller engines. (Rolls-Royce jet engines are named after British rivers). He was created a Companion of Honour in 1943, and a baron in the Birthday Honours list in June, 1950.

HO CHI MINH (HO SHI MIN), Vietnamese politician (b. in a small village of Tongking, May 19, 1890). His real name of Nguyen Tat Tan he changed to Nguyen Ai Quoc ("friend of the people") and adopted a number of other aliases before assuming the name of Ho Chi Minh ("the brilliant one"). At 18 he became a sailor, spent some time in the United States and Great Britain and settled for a while in France. His political career began in Dec. 1920 when he joined the newly formed French Communist party. After three years in Moscow from 1923, he appeared in 1926 at Canton as translator to the Soviet consulate general. His actual task was to create the Young Annamese Revolutionary league. When released from the imprisonment meted out to him in the following year when the Kuomintang-Communist collaboration came to an end, he stayed for two years in Siam preparing an insurrection in Indo-China. After riots in Tongking in 1931, his Indo-Chinese Communist party was banned and he fled to Hong Kong. There, however, he received a six months' sentence for conspiracy and later returned to Moscow. In 1942 he reappeared in southern China as leader of a League for the Independence of Vietnam (Viet Nam Doc Lap Dong Minh Hoi—Vietminh for short). After the collapse of Japan he proclaimed at Hué on Aug. 28, 1945, the People's Republic of Vietnam with himself as president and the former emperor Bao Dai as "supreme adviser." In the summer of 1946 he went to Paris as a guest of the French government to negotiate a treaty. A *modus vivendi* was signed at Fontainebleau on Sept. 14, 1946: Vietnam was recognized as an independent unit within the Indo-Chinese federation, but the status of Cochin-China was to be settled later. Warfare broke out in Dec. 1946 and continued. In an interview published in Paris on Aug. 5, 1950, by the Communist newspaper *Ce Soir*, Ho expressed satisfaction at being recognized by the U.S.S.R. and China; he said that the first condition for peace was total evacuation of French troops.

HOCKEY. In 1950 England won the international hockey championship for the first time since 1936, defeating Ireland 3-2, Scotland 5-2 and Wales 4-0. The records of the four countries were:

	Played	Won	Drawn	Lost	Goals for	Goals agst.
England	3	3	0	0	12	4
Ireland	3	2	0	1	9	4
Wales	3	1	0	2	2	9
Scotland	3	0	0	3	3	9

In matches which do not count in this championship England lost to Holland 0—3, and Ireland drew with Belgium 2—2. Cambridge defeated Oxford 1—0 in the 50th university match. The Inter-Services championship was won by the R.A.F.

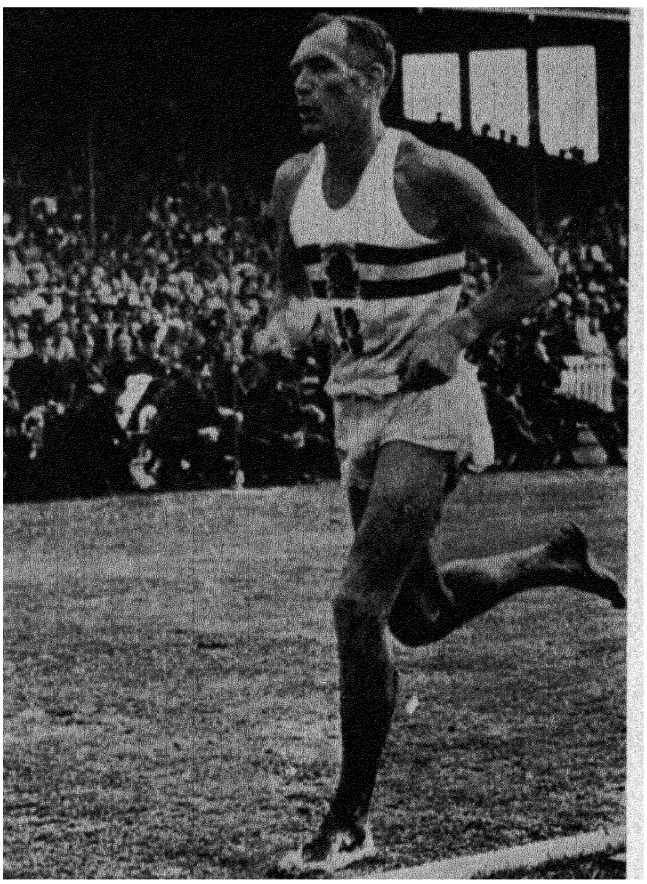
The England women's hockey team suffered one of their rare reverses, losing 3—5 to Ireland, who were undefeated. England won all their other matches, defeating Scotland 6—2, Wales 11—1 and Holland 1—0. Scotland beat Wales, who failed to win a game, 4—1.

The fourth triennial conference and tournament of the International Federation of Women's Hockey Associations took place in South Africa in the summer. The English touring team won first place in the tournament. They travelled 6,000 mi. in South Africa to play 18 matches, of which they won 16, drew 1 and lost 1, scoring 70 goals to 17 against. South Africa were second, Scotland third and Ireland fourth.

The International Hockey board, which makes the rules of the men's game for the whole world, adopted the 16-yd. striking-circle, which had been the subject of experiment the previous season; and rule 5 was amended accordingly. The 15-yd. circle was still the rule in women's hockey.

(R. L. Hs.)

HOLDEN, JOHN THOMAS (JACK), British athlete (b. Bradley, Staffordshire, March 13, 1907), took up running in 1925, specializing in cross-country and long distance events, and ran for his local club, Tipton Harriers. He scored his first championship win in 1930 when he dead-heated for his county's cross-country title. Between that year and 1946 when he turned to marathon running he won the A.A.A. 6 mi. title (1933-35), 10 mi. title (1934), international cross-country championship (1933-35 and 1939), English championship (1938-39 and 1946) and midland championship (1932-39 and 1946). He was not chosen for the European games in 1946, but in October of that year he created new British and English native records at 25 mi. (2 hr. 28 min. 56·6 sec.) and went on to cover 30 mi. in 3 hr. 0 min. 16·8 sec.—claimed as a world record. He won the A.A.A. marathon title in 1947 and retained it in 1948, 1949 and 1950. In 1950 he showed himself to be probably the greatest marathon runner in the world. In the Empire Games at Auckland, New Zealand, in February, he won in 2 hr. 32 min. 57 sec. His shoes burst after 19 mi. of the 26 mi. 385 yd. course and he ran the last seven miles without them. The race took place in a rainstorm and he finished four minutes ahead of his nearest rival. Two miles from home he was attacked by a great dane. The race for the European championship in Brussels in August also started in rain. He won this race about 200 yd. ahead of a Finn and Russian



Jack Holden, the British marathon runner, winning bare-footed the marathon event at the Empire Games in Auckland, Feb. 1950.

in the fastest time of his career, 44 sec. faster than his New Zealand time. A sports groundsman at Tipton, Staffordshire, he stands only 5 ft. 5 in. and weighs 10 st. 3 lb. He is married and has two daughters.

HOLLAND: *see* NETHERLANDS.

HOLLAND, SIDNEY GEORGE, New Zealand statesman (b. Greenlade, New Zealand, Oct. 18, 1893), took office as prime minister on Dec. 13, 1949, taking also the portfolio of minister of finance. (For his early career see *Britannica Book of the Year 1950*).

On Feb. 1, 1950, he issued a comprehensive survey on the state of New Zealand's finances in which he stressed the seriousness of the financial situation. Early in Feb. 1950 he was present at the Empire Games (*q.v.*) which were held at Auckland. On May 5 he announced the abolition of subsidies on a wide range of foodstuffs, household necessities and services, the ending of butter rationing and withdrawal of the wool subsidy. In June he held talks with Field Marshal Sir William Slim. In the House of Representatives on July 5 he said that the government had won in six months the battle against inflation which had been expected to last three years, and on Aug. 24 he presented his budget in which he announced that the social services introduced by the former Labour government would be maintained. A strike of watersiders at all ports in September caused him to declare a state of emergency on Sept. 20. Winding up the budget debate on Sept. 7 he claimed that no previous government had been able to put so much of its election policy into effect in the first nine months of office. On Nov. 25, in a broadcast he announced the "freezing" of certain incomes from wool sales to prevent inflation. He said of the death of Peter Fraser on Dec. 12 that "New Zealand has lost its most distinguished and famous man. He served New Zealand, the Commonwealth and mankind faithfully and well." Holland left New Zealand on Dec. 27 for the conference of Commonwealth prime ministers in London in Jan. 1951.

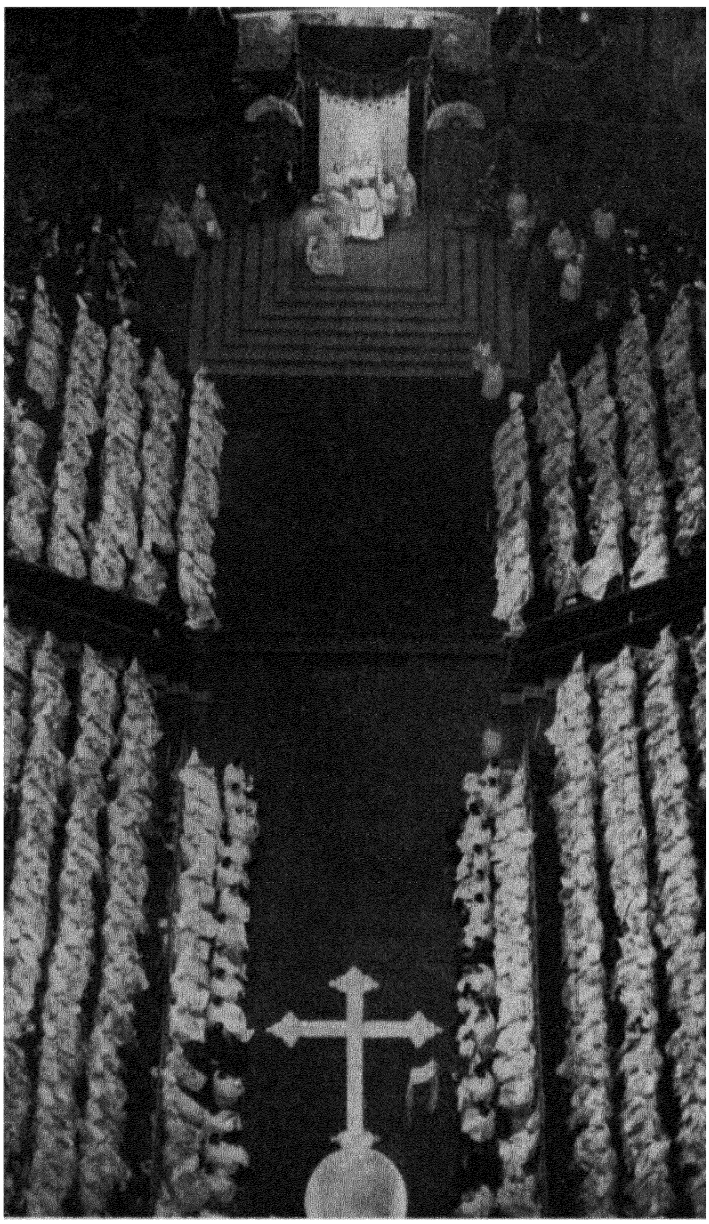
HOLY YEAR. The chief significance of the Holy Year of Jubilee proclaimed by Pope Pius XII for 1950 lay in the diverse nature of multi-racial, multi-lingual throngs that assembled in Rome in St. Peter's square to make their way, singing their litanies, into the vast basilica that is the heart and centre of the Roman Catholic Church on earth. They came from every continent because the Pope asked them to come, that they might proclaim to the world and impress more firmly in their own minds the unity, the universality and the strength of the church. It is true that, by visiting the four major basilicas—St. Peter's, St. Mary Major, St. John Lateran and St. Paul's-outside-the-Walls—and by fulfilling the prescribed spiritual conditions, the pilgrims could gain the special jubilee indulgence; but those who were unable to go to Rome could gain this at home during 1951, and it is not disparaging the spiritual nature of the Holy Year to say that the indulgence was the reward rather than the main purpose of the pilgrimage.

A Holy Year is now proclaimed every 25 years; that of 1933 was outside the main series, being in special commemoration of the 19th centenary of the Crucifixion. The intention is that at least one Holy Year shall fall during the active lifetime of everyone who lives a normal span. The archbishops and bishops of the Roman Catholic Church are required to make regular visits to the Holy See every few years, at intervals which vary according to the distance from Rome of their sees. These are called visits *ad limina apostolorum*, "to the threshold of the Apostles"; and it may be said that a Holy Year is the occasion for the visits of the laity *ad limina*, less frequent because the laity have no formal business to transact, but comparable nevertheless.

The first Holy Year of which there is detailed historical record was proclaimed by Boniface VIII in 1300; and the first year of a new millenary had been regarded as of special significance since the approach of the year 1000, when some holy men (although not the church as a whole) had expected the Day of Judgment. The second Holy Year was proclaimed by Clement VI in 1350; there followed those of 1390, 1400 and 1423, which were adversely affected by schism and plague, and that of 1450, when the bridge of Sant' Angelo collapsed under the weight of the pilgrims and many were drowned in the Tiber; and the first of the 25-yearly series was proclaimed by Sixtus IV in 1475. So it continued with little interruption until the end of the 18th century, when it became politically impossible for Pius VI to invite pilgrims to Rome in 1800. Leo XII invited pilgrims in 1825, but Pius IX, whose reign, as Pius VI's, was complicated by political disturbance, conceded the indulgences without opening the Holy Doors either in 1850 or in 1875, although 1875 is counted as the 21st of the series of Holy Years.

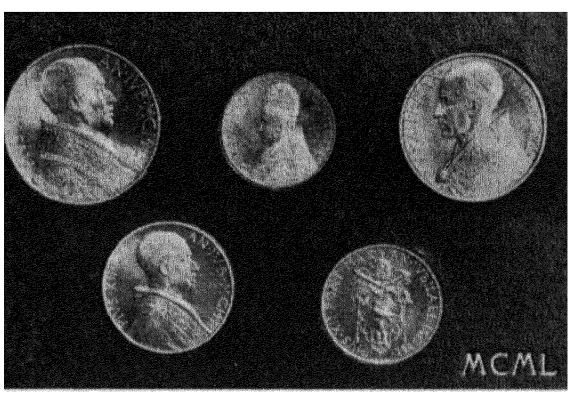
However, although it is now firmly established as the traditional practice, it is not automatic that a Holy Year should occur every 25 years, but a matter for the decision of the reigning pontiff; and it was in his address to the College of Cardinals on his patronal feast of St. Eugenius, June 2, 1948, that Pius XII announced that the 25th Jubilee would be observed in 1950, adding: "The more the world of today exhibits the spectacle of its dissensions and its contradictions, the greater the duty of Catholics to give a shining example of unity and cohesion, without distinction of nation or race." Eighteen months later, when the Holy Year began, he introduced it in another address to the College of Cardinals, on Dec. 23, 1949, commenting on the two themes that he

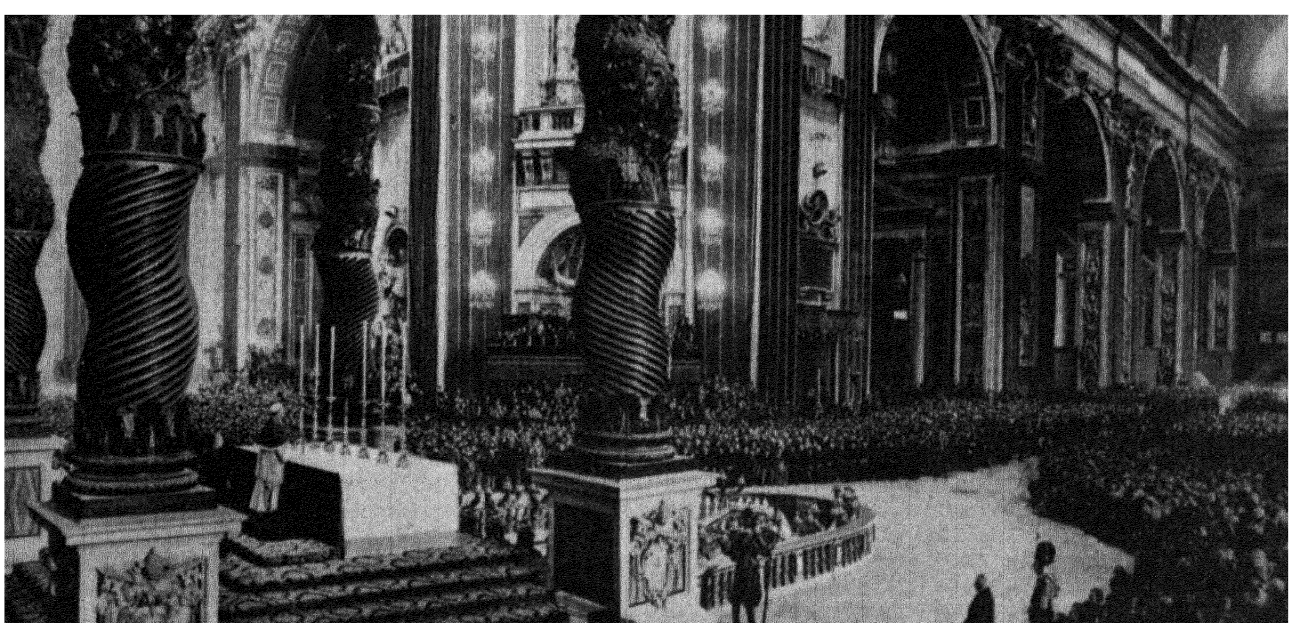




THE HOLY YEAR 1950

On Nov. 2, 1950, Pope Pius XII (right) proclaimed the dogma of the bodily Assumption of the Blessed Virgin Mary at a ceremony in St. Peter's, Rome, in the presence of 35 cardinals and 485 patriarchs, archbishops and bishops. During the year the Pope created five saints. One of these, Domenico Savio—a 14 year-old boy who had died 93 years before, was made a saint in the presence of thousands of pilgrims on March 6 (bottom).
A medal (above) was given to all pilgrims, and special Vatican coins (below) were struck to commemorate Holy Year.





had developed in his prayer for the Holy Year on Christmas Day, 1948, describing it as a propitious time of grace, of spiritual renewal and of reconciliation: " The year of the great return and of the great pardon."

In this inaugural address the Pope expressed the confident hope that the year would see not only many reconciliations with the church of many who had left her, but also " multiple conversions to the Christian Faith of pagans in mission lands." " It will be a comfort to you to know that since the Jubilee of 1925 the number of Catholics in those far-off countries has more than doubled; and in some districts of Africa the visible Church has become the foundation of social life, thanks to the deep Christian influence exerted both in private and public life." " But," the Pope went on, " with the greatest grief of soul, we cannot help thinking of the grave dangers threatening or already afflicting religion and its institutions in other countries of Europe and Asia, like limitless China, where revolutionary upheavals in conditions that were already unstable have converted fields flourishing with life into cemeteries of death."

It proved, indeed, that during the Holy Year none save exiles were able to come to Rome to represent the 40 or 50 million Catholics " behind the iron curtain " in Europe; and of the bishops of those countries only Adam, Cardinal Sapieha, archbishop of Cracow, was able to make the journey, as he did in April. The *Mostra dell'Attività*, one of the series of Holy Year exhibitions, included a special section entitled " Chiesa Martire," where pilgrims could find detailed statistics and photographs to contrast the flourishing life of the church in those countries in happier days with the martyrdom of 1950, with special tableaux to draw attention to the fate of József, Cardinal Mindszenty, primate of Hungary, of Archbishop Aloysius Stepinac, primate of Yugoslavia, of Archbishop Josef Beran, primate of Czechoslovakia, and of the Metropolitan Iosip Slipyj, Uniate archbishop of Lwów, with his colleagues in that Uniate hierarchy which was languishing in Siberia. This section of the exhibition ended with a room containing large maps of the regions where the church was suffering martyrdom; and Mantegna's " Crucifixion " reminded the visitor there of the part that this suffering, united to the sufferings of Christ, might play in meriting that great pardon of which the Pope had spoken.

The bull announcing the Holy Year, entitled *Jubilaeum Maximum*, had been promulgated on May 26, 1949, and on Christmas Eve the year was liturgically inaugurated, with the solemn opening of the Holy Door of St. Peter's by the Pope, while cardinals specially designated as legates *a latere* opened the Holy Doors of the other three major basilicas—Eugène, Cardinal Tisserant, at St. Paul's-outside-the-walls, Luigi, Cardinal Micara at St. Mary Major, and Alessandro, Cardinal Verde, at St. John Lateran. The Pope struck three times, with a golden hammer having an ivory handle (the gift of the Catholic workers of Italy), at the wall that had closed the space since the last Holy Year, and at the third stroke the bricks, previously loosened, fell away. The space of the Holy Door in St. Peter's was closed at night through the year by a handsome pair of bronze doors given by the bishop of Basle and Lugano, on behalf of the Catholics of Switzerland. On the Christmas Eve following, at the end of the year, came the ceremonial closing of the door in the four basilicas, with three bricks ceremoniously laid in each.

The Holy Door is intended to recall the words of the Prophet, " This is the door of the Lord; the just shall enter through it "; and is also a symbol of Christ who likened himself to a door: " I am the door; who enters through me shall be saved."

The opening and closing of the Holy Door was the only ritual ceremony connected directly with the Holy Year; but in order to give the pilgrims the opportunity to assist at solemn ceremonies there was through the year a long series of beatifications and canonizations, performed with great magnificence, as well as other major liturgical ceremonies, of which the most important was the solemn proclamation on Nov. 1 of the dogma of the bodily Assumption of the Blessed Virgin Mary into Heaven, when 70,000 pilgrims crowded St. Peter's square and the Via della Conciliazione right down to the Tiber.

The canonizations began after Easter: they were those of B. Marie-Emilie de Rodat, the French foundress of the Sisters of the Holy Family, on April 23; of B. Antonio-Maria Claret, the Spanish founder of the Order of Clarettines, on May 7; of B. Bartolomea Capitanio and B. Vincenza Gerosa, Italian foundresses of the Congregation of Sisters of the Child Mary, on May 18; of B. Jeanne de Valois, French foundress of the Order of the Annonciades, on May 28; of B. Vincenzo Strambi, an Italian bishop of the Passionist Order, on June 11; of B. Maria Goretti, the Italian child-patron of purity, on June 25; and of B. Maria-Anna de Jesus de Parede, of Ecuador, on July 9. The canonization of B. Maria Goretti, performed out of doors in the presence of immense crowds, was an especially memorable occasion.

The beatifications, which preceded and followed the canonizations, were those of Vincenzo Pallotti, the Italian founder of the Pallottine Fathers, on Jan. 22; of Maria-Desolata Torres Acosta, Spanish foundress of the Institute of the Servants of Mary, on Feb. 5; of Maria Lopez Vicuna, Spanish foundress of the Institute of Daughters Immaculate, on Feb. 19; of Domenico Savio, the Italian boy-pupil of St. John Bosco, on March 5; of Paola Elisabetta Cerioli, Italian foundress of the Institute of the Holy Family, on March 19; of Maria de Mattias, Italian co-foundress of the Congregation of the Adorers of the Most Precious Blood, on Oct. 1; of Marie Javouhey, French foundress of the Sisters of St. Joseph of Cluny, on Oct. 15; and of Marguerite Bourgeoys, French-Canadian foundress of the Sisters of Our Lady, on Nov. 12.

Other ceremonies of special note included the solemn liturgies of the Eastern rite in the Church of Sant' Andrea della Valle on Jan. 6, the feast of the Epiphany, and the solemn liturgy of the Byzantine rite celebrated in St. Peter's by the Melchite patriarch of Antioch in the presence of the Pope on Nov. 26.

By the end of the summer five special exhibitions had been opened in the newly built halls where the Via della Conciliazione abuts onto St. Peter's square, in the place called the Palazzo dei Propilei. The most important of these dealt with the sacred art of the missionary church and was the work principally of Archbishop Celso Costantini, appointed in 1922 to be the first apostolic delegate to China and now secretary of the Sacred Congregation of Propaganda, who, with the encouragement of Pius XI, had planned this exhibition as long ago as 1937. It was to have coincided with the world exhibition to be held in Rome in 1942; but that Fascist project was made impossible by the war, and in any case the Pope had explicitly forbidden the association of an exhibition bound up so intimately with the life of the universal church with so secular a display. The man appointed by Archbishop Costantini in those early days to be secretary of his projected exhibition was Alcide De Gasperi, the Christian Democrat prime minister of Italy when the exhibition was actually held.

The main purpose of this exhibition was to show how the church in the missionary lands does not impose European forms or European culture but baptizes and builds upon the local ones. It contained many extremely beautiful things, although these were curiously interspersed with things of less beauty. However, some of the Chinese and, more especially, of the Japanese paintings, the little Indian ivories

of the Madonna and some of the African carvings, especially those from French West Africa, were memorable. The intention of the exhibition was, of course, primarily apologetic and not aesthetic.

The second in importance of the exhibitions was that concerned with the sacred art of the preceding 50 years in countries where the hierarchy is established, presenting more than 2,000 exhibits from about 30 countries and also showing much diverse merit. Special distinction was lent by such men as Maurice Denis, Desvallières, Georges Rouault and Marc Chagall in France, Salaverria and Llimona in Spain, Holzmeister and others in Austria, Beretta, Frey and Mutzger in Switzerland, German architects like Böhm, Dollgast or Herkommer, and such Italians as Wildt (whose "Santa Lucia" attracted more attention than anything else in the exhibition), Medardo Rossi, Bistolfi, or Previati. It was unfortunate that the exhibition contained so little from Britain, Ireland or the United States, and the central Committee made it clear that it was not the fault of the organizers if more exhibits from these countries were not available. It was not true, as some people alleged, that works of world-wide importance were sent back, "because they were excessively modern"; or that everything that was done or happened was just as it had been arranged in Rome. If disproportionate attention seemed to have been paid to the Belgian Congo in the exhibition of missionary art and to Finland in that of modern sacred art, this was due to the Belgian government's lavish contribution of material and to the energy of the Finnish legation to the Holy See.

The other three exhibitions were of less importance, although full of interest; they dealt with "Catholic activity," by which was meant not only Catholic Action but the general Catholic contribution to culture throughout the world; with Catholic charitable and relief work, especially during and since World War II (here the Americans came into their own); and finally with the liturgical art of the Holy Land and of the eastern church generally. In all these, too, anomalies in proportion were to be observed: for instance in that section of the exhibition of "Catholic activity" which dealt with primary and secondary education the Dutch wholly dominated the scene in consequence of the energy of Dutch Catholics.

Similarly, the numbers of pilgrims in the individual national contingents visiting Rome bore little relation to the size or strength of the Catholic body in the countries from which they came, but depended on the distance to be travelled, on the various difficulties placed in the way of travel by some of the governments concerned, on currency-restrictions, etc. and finally on the zeal and efficiency of the national committees that had been established in each country to organize the pilgrimages. The Germans, for instance, living under occupation, would hardly have been expected to be able to come in any great numbers, even from the Western zones, in view of the formidable financial difficulties; but in fact they came in great numbers, thanks to the initiative of their organizers in securing from the Vatican financial grants for their assistance. Such grants would have been equally forthcoming in case of need for the Catholics of any other nation.

Even while he was at his summer residence at Castel Gandolfo during the hot weather the Pope received nearly 250,000 pilgrims in 80 audiences. The total number of the faithful making the pilgrimage cannot be exactly computed, but it probably approached 3 million by the end of the year, as against only 800,000 in the Holy Year of 1925. Of those 3 million, about one-third came without availing themselves of the special travel facilities or presenting themselves at the offices of the central committee, so that there cannot be an exact statistic. About 2 million availed themselves of the special travel facilities, and it is interesting to compare some of the monthly totals with those for 1925: 80,763 in July 1950, as against 8,370 in July 1925; 155,247 in Aug. 1950, as against 45,901; 258,543 in Sept. 1950, as against 129,989. The monthly figures moreover increased in the later part of the year, so that if the Pope decided not to extend the Holy Year, as his predecessor had done for the special Holy Year of 1933, it was not for any lack of pilgrims. The figures for January and February were 30,477 and 36,165 respectively; but for September and October they were 204,268 and 197,981. These totals likewise take no account of numerous pilgrims who came without reference to their national committees and did not present themselves at the central office.

As to national groups, the Italians naturally headed the list, with some 600,000 registered pilgrims; next came France, with some 300,000; next Germany, with some 50,000; next Spain, with some 30,000; next Belgium, with 27,000; next Austria, with 25,000; next England and Wales with 22,000 (the Scots were a further 2,000); next the United States, with 18,000. Ireland sent about 10,000; Latin America 12,000; Africa 3,000; Scandinavia 3,000. Polish refugees in the various countries of western Europe sent the remarkable total of 1,200; while other refugee contingents included 300 Hungarians, 500 Rumanians, 250 Czechoslovaks and 250 White Russians.

With so many Catholics from all over the world coming to Rome, the opportunity was taken to hold a long series of international congresses. In February one was devoted to the Catholic press, at which important steps (to be followed up by a meeting in Paris in June) were taken towards establishing an effective permanent international organization. In March came the international congress of the Apostolate of the Sea, concerned with missionary and welfare work on behalf of sailors. In May there were simultaneous congresses, one concerned with sacred music and one with sacred drama, the latter being mostly concerned with the cinema, under the auspices of the Office Catholique International du Cinéma. Immediately after these there opened, on May 31, an international congress of social science, sponsored by the Fribourg institute. Later in June and in July there was a pause in the sequence; then in August came the Carmelite congress, the 22nd international congress of Catholic Esperantists and the congress-pilgrimage of the Pax Christi movement, a movement of French origin which was doing important work for international understanding, especially among the French and the Germans. At the beginning of September the international organization of university teachers and graduates, Pax Romana, came to Rome after its meeting in Amsterdam; while at the same time the first international congress of Catholic artists was being held in Rome, together with congresses for Catholic pharmacists, Catholic lawyers and Catholic nurses; an international missionary congress was being held at the same time. The 7th international conference on social service, the international congress of the Sodality of Our Lady, the international congress on the History of Scholastic philosophy, the 3rd international congress on Thomism and a meeting of seminary professors also took place in September. October brought the first international congress of Catholic prison and reformatory chaplains, an important international catechetical congress, an international Franciscan educational congress, and, in the last week of the month, leading up to the proclamation of the dogma of the Assumption, an international congress on Mariology. November saw another lull in these gatherings, but in December there was the congress of Catholic publishers, and finally, in the last days of the Holy Year, one of the Third Order of St. Francis (Franciscan Tertiaries).

Simultaneously with these more important gatherings, lesser and more specialized meetings were going on. To all the more important and to many of the others Pope Pius XII delivered addresses, often of much weight; and he spoke also to a considerable number of secular international gatherings that chose Rome as their meeting-place during 1950. Likewise he always delivered special addresses to the pilgrims whom he ceaselessly received; to the distinguished visitors granted private audiences; to the privileged groups of perhaps 20 or 30 at a time who had special audiences; and to the vast throngs that packed St. Peter's at least twice a week and sometimes more often for the mass audiences. During these last the Pope would be carried through the great basilica on the *sedia gestatoria*, pausing to speak for perhaps a quarter of an hour before the high altar and chatting individually as he passed to the pilgrims, who acclaimed him with cheers and waving in the manner that is traditional in St. Peter's.

No Holy Year had seen any number of pilgrims to compare with the numbers that came to Rome in 1950, and no Pope had devoted himself with such unsparing energy to so exacting a task as that which fell to Pius XII. (*See* also ROMAN CATHOLIC CHURCH; ROME.) (M. DK.)

HONDURAS. Republic of Central America bounded E. by Guatemala, S. by El Salvador, the Pacific ocean and Nicaragua and N. by the Caribbean sea. Area: 59,160 sq.mi. Pop.: (1945 census) 1,200,542; (mid-1950 est.) 1,533,625, about 87% being *mestizos*, that is, Indians with an admixture of Spanish blood; there are also over 105,000 tribal Indians; on the Atlantic coast there are over 24,000 Negroes, of whom 3,000 are British subjects; the white population is less than 2%. Language: Spanish, but unknown to thousands speaking only Indian dialects. Religion: Roman Catholic. Chief cities (pop., 1949 est.): Tegucigalpa (cap., 62,263); San Pedro Sula (24,425); Comayaguela (16,907). President of the republic, Juan Manuel Gálvez.

History. The administration of President Gálvez was accused by the Liberals in May 1950 of depriving them of the rights of assembly and public expression. Countering, the government cited a statute forbidding the dissemination of partisan propaganda except during election campaign periods. Criticism by the Liberals continued, but the government strengthened its position by thwarting an attempted *coup d'état* in September. Two army officers were arrested before the *coup* was set off, and the other conspirators fled, according to the official version. In the municipal elections on Nov. 26, the administration party won 77,593 votes while the Liberals received 8,104 and other groups 13,934.

Two new financial institutions, the Central Bank of Honduras and the National Development bank, were created by the National Congress in February and began operations on July 1. The former, with an initial capital of 500,000 lempiras, was authorized to manage monetary, credit and exchange policy, while the latter, with a capital of 1·5 million lempiras, was established to make loans, issue and sell public securities and finance public works, especially agricultural projects. Shortly after it opened, the Central bank began to withdraw the 12 million U.S. half-dollars from circulation and for the first time in several years, released the national coinage for circulation.

Education. Schools (1949): primary 1,700, pupils 83,619; secondary 27, pupils 1,340; teachers' training colleges 24, pupils 1,541; commercial schools 14, pupils 1,073. The national university enrolled about 500 and the Pan American School of Agriculture 171 students.

Foreign Trade. Exports in 1948-49 totalled U.S.$ 20·8 million and imports $34 million. Most of the trade was with the U.S. Bananas (13,926,896 stems) accounted for 34% of the export value; logs and timber 12·6%. Other exports included coffee (8,292,560 lb.), coconuts, abacá fibre, cattle and pigs, gold (20,820 troy oz.) and silver (3,389,513 oz.).

Finance. Budget (1949-50 actual) revenue 27,792,221 lempiras, expenditure 26,538,651 lempiras. Currency circulation (May 1950): 18·5 million lempiras. Monetary unit: *lempira*, officially fixed at 49·5 U.S. cents on Oct. 31, 1950. (M. L. M.)

HONDURAS, BRITISH: *see* BRITISH HONDURAS.

HONG KONG. British colony on the coast of China consisting of Hong Kong island and the ceded territory of Kowloon and Stonecutter's island. The New Territories (the remainder of the Kowloon peninsular and numerous islands) were leased from China in 1898 for 99 years. Area: colony 36·5 sq.mi., New Territories 355 sq.mi. Pop.: (1931 census) 849,751; (1950 est.) 2,250,000. Language: Chinese (Cantonese); about 5% speak English. Capital, Victoria. Administration: governor; executive council, 7 official and 4 (incl. 2 Chinese) unofficial members; Legislative Council, 9 official and 8 (incl. 3 Chinese and 1 Portuguese) nominated unofficial members. Governor, Sir Alexander Grantham.

History. Proposals for constitutional revision made in 1948-49 excited little public interest and made no further progress during 1950. The year opened with a strike of tramway employees and unrest in other utilities. Riots at the end of January after a ban on meetings were followed by the deportation of union officials, and the strike ended on Feb. 9.

The survey for a new airport off Deep Bay near the Chinese frontier, to cost £3,250,000 was begun in February. In May a British order-in-council gave the supreme court jurisdiction to decide the ownership of 71 aircraft of the China National Aviation corporation grounded at Hong Kong and the court confirmed the claim to ownership of the Chinese people's republic. Seven were damaged by time-bombs on April 2. In June the secretary of state for war, John Strachey, visited Hong Kong to inspect the troops and the defences.

Thought in Hong Kong, always susceptible to external influence, continued to be dominated by the situation in China. The improvement hoped for after the recognition of Peking did not take place, though the reply of the head of the Peking government, Chou En-Lai, implying that the status of Hong Kong would not be an immediate issue gave satisfaction.

The continuous occurrence of incidents arising out of the "little war" between the Chinese Nationalists and the Communists caused uneasiness, and the bombing by the Nationalists of the Canton road and railway interfered with the movement of road and rail transport.

Refugees continued to pour into Hong Kong and the population reached a record level. Many came from Shanghai and Shanghai industries, particularly textiles, became prominently represented in Hong Kong. From April 28 the government suspended immigration for Chinese without valid entry permits. The population then began to fall, partly because of more stable conditions in China, and in October the outlook of traders was more optimistic, particularly about Shanghai.

Hong Kong's large garrison was reduced slightly by transfers to Malaya early in the year. Troops sent to Korea in August were replaced. The border was quiet and Communist forces much reduced by transfer northwards.

For the third year in succession trade figures were a record, and for 1950 they were 40% above those for 1949. Trade with China, which had fallen in 1947-48 to half the prewar figure, also considerably improved.

Finance and Trade. Currency: Hong Kong dollar ($1=1*s.* 3*d.*). Budget (1949): revenue $194,933,955; expenditure $159,954,023. Foreign trade (million HK$, 1949; 1950 in brackets): imports 2,905 (3,803) including from China 592·8 (857·9) and Macao 77·6 (104·4); exports 2,474 (3,757) including to China 584·8 (1,461·1) and Macao 268·5 (208·4). (H. Is.)

HOPS. Weather conditions throughout the 1950 season were generally favourable in all districts. After the drought of 1949 there was ample rainfall both in the winter months and during the spring and early summer. Pests and diseases were not especially prevalent and, where prevention or remedy was possible, were tackled successfully. The more serious diseases such as verticillium wilt, nettlehead and mosaic, against which no effective safeguard had been found, continued to make inroads. The weather at the end of the growing season, however, was unfavourable to the spread of disease with the result that a bumper crop was harvested. As always, the entire crop would be used in brewing beer.

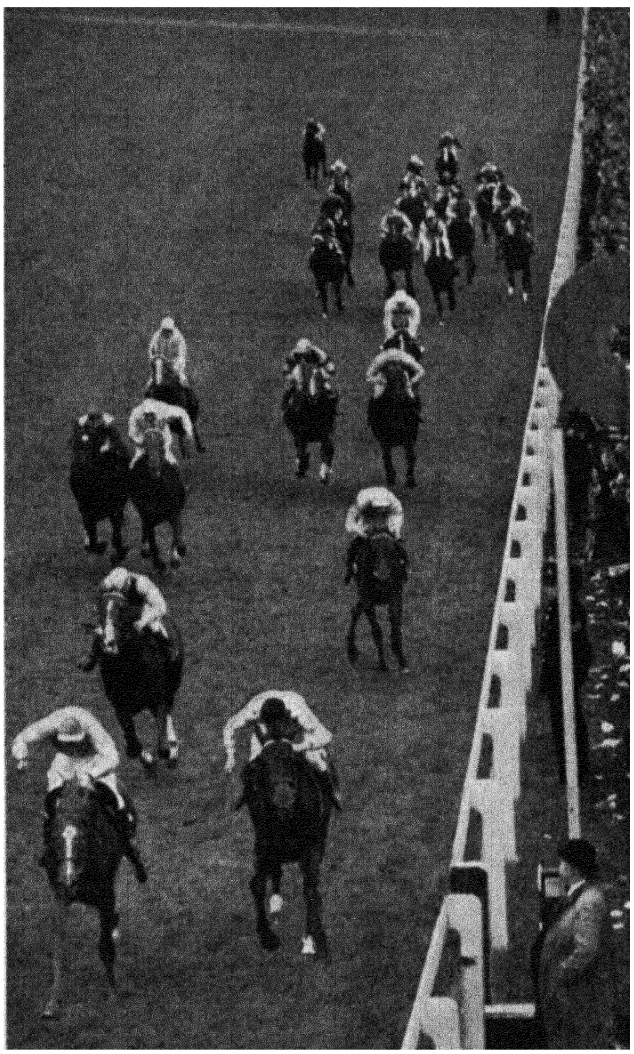
The Hops Marketing board estimate of the crop consigned to it was 337,138 cwt., the largest for at least 15 years past. This figure did not include hops grown by brewing firms for their own use. The total of contracts at the end of the year was 326,429 cwt. which included 54,405 cwt. for overseas breweries. The average price to be paid for the crop was fixed by the Permanent Joint Hops committee at £21 a cwt., against £26 10*s.* in 1949. The abnormally heavy yield in 1950 had resulted in a reduced production cost per cwt. although the actual cost per ac. was higher than in 1949. Hopes by the public of any consequent reduction in the price of beer fell when it was made clear that although this reduction meant a saving on hops of 1*s.* a barrel, the increased price of barley meant a rise of 2*s.* a barrel in production costs.

One of the most serious difficulties which was likely to beset the hop grower was created by verticillium wilt. No remedy had been found and although precautions helped to check the spread of the disease to fresh areas, the best safeguard was felt to be the planting of new varieties resistant to the disease. A substantial acreage had already been planted but better knowledge of the worth of these hops as brewing material was required before the acreage could be greatly expanded. (*See* also BREWING AND BEER.) (X.)

HORSE RACING. A winter of exceptional mildness allowed an almost unparalleled amount of racing under National Hunt rules in Great Britain and Ireland: not until the end of Jan. 1950 did frost prevent racing in England, and then only for a short time. For the first time since 1927 the Grand National was won by the favourite: this was Mrs. L. Brotherton's nine-year-old gelding Freebooter, trained by R. Renton at Ripon, Yorkshire, and ridden by J. Power. For the third year in succession the Cheltenham gold cup was won by F. L. Vickerman's Cottage Rake; and for the second year in succession the Champion Hurdle cup was won by Hatton's Grace. Both horses were trained by M. V. O'Brien in Ireland and ridden by A. Brabazon.

Not for many years had the flat racing season been attended by more favourable conditions underfoot. The inclement weather, which persisted throughout the summer, did not encourage large crowds at race meetings but facilitated the work of trainers: in consequence the size of fields was less diminished in midsummer than is usual. The system of the photo finish was installed on more courses in England and proved generally satisfactory, although there were isolated instances of the judge's misinterpreting the photograph and giving erroneous decisions. A system of timing races electrically was instituted at Newmarket in the autumn.

There had been suggestions in the 1949 season that the postwar dominance of French horses might be weakening; but in 1950 they enjoyed unprecedented success in the English classic races. Of these only one was won by an English horse, the Aga Khan's Palestine, which in the Two Thousand Guineas defeated the American-bred Prince Simon by a short head. Two days later W. R. Johnstone (*q.v.*) won the One Thousand Guineas on the French filly Camaree. The remaining three classic races were all won by horses from the



M. Boussac's "Galcador," ridden by W. R. Johnstone, winning the 1950 Derby at Epsom.

stable of Marcel Boussac, trained by C. Semblat and ridden by Johnstone. Prince Simon was beaten by a head in the Derby by Galcador and later broke down in training when likely to start favourite for the St. Leger. Boussac's other winning representatives were Scratch II in the St. Leger and Asmena in the Oaks.

Although the French three-year-olds were so much better than the English, they were not considered of outstanding quality. The best was F. Dupré's Tantième who beat Galcador in the French Two Thousand Guineas, was beaten by Scratch II in the Prix du Jockey Club but ended the season by winning the £35,040 Prix de l'Arc de Triomphe, in which Scratch II finished fourth. Since this race, in October, came one day after the King George VI stakes at Ascot, the field at Ascot was less representative than might have been expected. The winner was Cagire II, a French-bred colt trained in England, who had been fifth in the St. Leger. The Grand Prix de Paris was won by Vieux Manoir, who later finished second to Scratch II in the St. Leger. The best three-year-old fillies in France were Corejada, who won the French One Thousand Guineas and the Irish Oaks, and Aglae Grace who beat Corejada in the French Oaks. One of Boussac's few failures in a remarkable season was in the Irish Derby, in which his horse, Pardal, who started favourite, could only finish third to the Irish colt Dark Warrior.

In spite of the easy training conditions few good two-year-olds appeared in England. By far the best was Mrs. J. F. C.

Bryce's Big Dipper. In France the best was the Grand Criterium winner, J. Stern's Sicambre.

Though there had at first been little confidence in England that the French attack on the valuable long distance races could be successfully resisted, this was almost entirely achieved: only 3 English-bred horses, for example, were in the field of 13 for the Ascot gold cup, but one of these, Supertello, was the winner (he was, however, difficult to train and did not run again). The Goodwood cup, contested by a small field and run at a confusing pace, was won by a moderate French horse, Val Drake, who had been soundly beaten by Aldborough in the Queen Alexandra stakes at Ascot, and was to finish last to Aldborough in the Doncaster cup six weeks later. The five-year-old Aldborough died a few weeks after this race at the peak of his career: previously considered to be of doubtful temperament, he had run moderately over hurdles during the previous winter and was one of two horses to make astonishing improvement during the year. The other was Winston Churchill's French-bred Colonist II, a horse of great courage. Although he won three small races in the previous autumn, neither breeding nor performance had suggested that he possessed exceptional merit. Yet in 1950 he won, out of eleven races, the last six in succession; moreover, when not at his best he was fourth in the Gold cup; and by the end of the year he was the best stayer in England. A useful three-year-old English filly was the King's Above Board, one of the easiest Cesarewitch winners in the history of the race.

G. Richards headed the list of winning jockeys in England for the 23rd time. The season was remarkable for the performance of a 14-year-old boy, L. Piggott, who rode 52 winners and was, in the opinion of most good judges, the most promising apprentice for many years. (M. A. ME.)

United States. The battle between jockeys Joe Culmone and Willie Shoemaker for the most winners ridden in a single year was the feature of a thrill-packed season in the United States. Riding three winners apiece on the last day of the year, they finished even with 388 winners to equal the record set by Walter Miller in 1906.

There was a slight decline in attendance at U.S. racecourses during the year, although pari-mutuel (totalizator) betting showed a small gain. The Thoroughbred Racing association estimated $1,395 million betted, with attendance figures about 22,500,000.

Christopher T. Chenery's Hill Prince ran twice against Noor, Mrs. Charles S. Howard's Irish-bred five-year-old. The two horses first met at Belmont park on Oct. 7, when the Prince won the Jockey club gold cup (2 mi.). They met again on Dec. 9 in the Hollywood gold cup (1¼ mi.): Noor won easily. Noor was then retired to stud; his earnings were $346,940, the highest of the year.

Middleground, with apprentice Bill Boland up, won the Kentucky Derby at Louisville on May 6. Hill Prince was second, with C. V. Whitney's Mr. Trouble third. But Hill Prince beat Middleground in the Preakness at Pimlico in Baltimore on May 20. Middleground gained two-thirds of the " triple crown " by winning the $91,950 Belmont stakes on June 10. Middleground was retired in the autumn after breaking an ankle.

Hill Prince was U.S. champion and best of the three-year-old colts; Noor, the handicap leader; Next Move, the best three-year-old filly; Two Lea, the best handicap filly (or mare); Battlefield, the outstanding two-year-old colt; Aunt Jinny, best of the two-year-old fillies; and Oedipus, the best steeplechaser. (T. V. H.)

HORTICULTURE. The year 1950 was one of the wettest that horticulturists could remember: there were luxuriant growths on many plants, since the damp summer followed a mild winter. An unusual snowstorm over much of the south of England during May broke many branches and leaders of valuable trees, especially among the birches and conifers; but the snow protected fruit blossom and newly formed fruit from the subsequent frost, and a very heavy crop, especially of apples, was obtained in the south.

A conference and a special show devoted to the genera *Camellia* and *Magnolia* were held under the auspices of the Royal Horticultural society during April; and a report of the conference containing the papers given by various authorities was subsequently published. Before the conference a week's tour was made to gardens in Cornwall notable for their collections of the genera in question; and the visitors were much impressed by the enormous specimens covered with flower that have been grown there from seeds sent from the Himalayas and western China. A feature of the conference was the paper of T. T. Yü, dealing with the varieties of *Camellia reticulata* grown in temple gardens in Yunnan: the existence of these fine varieties was previously little known in Great Britain; but after this paper several plants of them were received at the society's gardens at Wisley.

Lord Aberconway's gift of the famous gardens at Bodnant to the gardens committee of the National Trust was announced at the end of 1949, and many visited them in 1950. Especial interest was aroused by Lord Aberconway's lecture on them to the Royal Horticultural society (of which he is president). The gardens committee in 1950 supervised the restoration, in preparation for the Festival of Britain in 1951, of five gardens belonging to the National Trust: Leith Hill place, Charlecote park, Cotehele, Stourhead and Killerton.

In Ghent the first quinquennial exhibition of the Ghent Floralies since World War II was held from April 22 to May and was notable for the magnificence of the display; it was organized by the Royal Agricultural and Botanical Society of Ghent. At the Chelsea show of the Royal Horticultural society and at the Northern summer show at Southport exhibits were very numerous and varied and well up to the standards of previous shows.

The new home of the John Innes Horticultural institution at Bayfordbury, Hertfordshire, was formally opened in June: the old house had been converted into laboratories and offices, and greenhouses of experimental design built. The new trial grounds of the National Rose society near St. Albans, Hertfordshire, were also opened in June.

In Scotland a gardens committee was inaugurated under the chairmanship of the Earl of Wemyss as part of the organization of the National Trust for Scotland.

The exhibition of botanical illustrations, organized at the National Book league in London by Wilfred Blunt, and opened on April 27 by Lord Aberconway, was particularly rich in most beautiful *florilegiae*.

Horticulturists were represented at the international botanical congress held in Stockholm in July 1950; and a small committee was set up to discuss with horticulturists the difficult question of the naming of garden-raised plants and to report to the next congress.

Plant-hunting expeditions were not so extensive as in 1949. Capt. Francis Kingdon-Ward was in northern Assam and upper Burma; but earthquakes interfered with his plans, and it was not expected that the seed harvest would be as extensive as is customary from this region.

Horticulturists all over the world regretted the deaths in 1950 of F. J. Chittenden and J. B. Stevenson. Chittenden was director for many years of the Royal Horticultural society's gardens at Wisley and later director of its publications, editor of its journal and keeper of the library; since his retirement he had been editor of the R.H.S. *Dictionary of Gardening*, which he had almost completed before his

death. Stevenson formed probably the finest collection of rhododendrons in Great Britain at his home at Tower court near Ascot, Surrey, and was chairman of the Royal Horticultural society's rhododendron committee and editor of *The Species of Rhododendron.*

Among notable horticultural publications of the year the following should be mentioned: *Orchids, their Description and Cultivation* by C. H. Curtis; *Lilies of the World* by H. D. Woodcock and W. T. Stearn; *Commercial Glasshouse Crops* by W. F. Bewley; and *The Art of Botanical Illustration* by Wilfred Blunt. A complete volume of the *Botanical Magazine* appeared under the editorship of W. B. Turrill; it was dedicated to J. B. Stevenson. An illustrated *New Plants of the Year*, dealing with plants which had received awards in 1949, was published by the Royal Horticultural society.

In 1950 the council of the Royal Horticultural society awarded the Victoria medal of honour to Andrew Harley, W. J. C. Lawrence, A. J. Macself and Guy L. Wilson. They also awarded the Veitch memorial medal to W. E. Th. Ingwersen and to Amos Perry. (P. M. S.)

United States. During 1950, florists throughout the U.S. united in opposition to a proposal of the Dutch marketing board that the shipment of cut flowers to America be permitted. They held that this would put Dutch growers in competition with the purchasers of U.S. florists' bulbs and seriously interfere with trade relations between the two countries. Bulb shipments from the Netherlands were sufficient to break the U.S. market at the end of the season, although the tulip crop was smaller than expected because of bad spring and summer weather.

Japan greatly increased its lily bulb exports but they still were less than before World War II. In the U.S. extreme cold weather in Oregon in January did considerable damage, but bulb growing in the northwest continued on a large scale.

Australia sent 200,000 orchid blooms to the U.S. by plane, twice as many as in any previous year. New Zealand sent the U.S. 2,500 lb. of grass and clover seed for the improvement of its grasslands.

Spraying from the air continued to be of great value in controlling forest pests. In the Pacific northwest 1 million ac. of Douglas firs were sprayed, at a cost of $1 million. Spraying was less successful, however, in attempted control of the Dutch elm disease, which spread rapidly in the east, causing the removal of thousands of trees. The elm trees in the Mississippi valley were being destroyed by a fungus disease hard to control. The oak wilt found in Wisconsin in 1941 had spread to adjoining states and was doing much damage. A new pest found on avocados in California was the six-spotted mite. Heavy applications of sulphur helped to keep it under control. A somewhat similar pest did much damage to evergreen trees in the east.

There was continued development and use of new chemicals for the control of insect pests and fungus diseases. Some of them were found very toxic although very efficient. Chemicals for killing crab grass received much attention. Experiments were being made with chemicals to retard the growth of lawn grass and with grasses that are natural dwarf.

Canada. The blueberry crop in the Saguenay section of Quebec jumped to a value of $3 million because of deep-freeze demands and the use of new self-sealing plastic crates. Nova Scotia had the worst potato blight in years, but two new blight-resistant kinds, Canso and Keswick, offered to give better future crops. (*See* also BOTANY; BOTANICAL GARDENS). (E. I. F.)

HOSPITALS. In Great Britain the new national hospital service controlled by the minister of health and financed out of taxation was 18 months old at the beginning of 1950. During the early part of the year steeply rising expenditure dominated the scene. Estimates for hospital, specialist and ancillary services rose from £200 million in 1949 to £270 million in March 1950, and the chancellor of the exchequer told the House of Commons that no further increase in cost could be permitted. The regional hospital boards were accordingly required to issue stringent instructions to hospital management committees, and it was widely understood that the restrictions applied not only to 1950-51 but also to future years. The figure was however based, for the first time, on reasonably accurate estimates prepared by the hospitals in the light of experience of working the new service and it was felt that, although some moderate increase in the level of expenditure would be required over the next few years, the new estimates did in general fix a reasonable level to which it should be possible to adhere. It could be said therefore—as it could not be said in 1949—that the finances of the new national health service had begun to settle down.

Several important steps were taken by the minister of health to secure adjustments which were felt to be necessary. The need for an improved system of costing, providing for a departmental analysis of expenditure, was widely recognized (*see* HOSPITALS in *Britannica Book of the Year, 1950*) and King Edward's Hospital Fund for London and the Nuffield Provincial Hospitals trust were officially invited by the minister of health to undertake an inquiry with the object of demonstrating the possibility of such a system and determining how detailed such an analysis should be. Discussion also centred on the internal administration of hospitals and a sub-committee was set up by the Central Health Services council to take evidence and report upon this subject. This was the first official inquiry of the kind ever undertaken in Great Britain and many hospital authorities were invited to submit their views (*see* " Preface to Hospital Administration," *Lancet*, London, Sept. 30, 1950).

By the middle of 1950 many of the " teething troubles " with which the new service had opened had been overcome. It was widely felt that the main plan was sound—viz., the local control of the hospital service by the hospital management committees appointed for the purpose, combined with a wider regional control of planning and of the distribution of consultant and specialist staffs. The hospital management committees, though built up of diverse elements and controlling groups of hospitals with many different traditions, had in a great many cases already developed a strong corporate spirit. In many groups the partnership of the administration with the medical and nursing authorities in the conduct of hospital affairs was clearly recognized. The hospital management committees themselves had adopted the practice of meeting monthly and discharging most of the business through a system of sub-committees (general purposes, finance, establishment, etc.). Sometimes a system of house committees for the individual hospitals was retained and found to work well; in other cases it had been tried and discarded as a hindrance to the development of the corporate spirit in the group as a whole.

The vast reorganization of the medical staffing of the hospitals of Great Britain, undertaken as part of the new service, was beginning to take effect. The regional hospital boards to whom this responsibility had been entrusted had, during the earlier months of the new service, done two most important things. First, they had drawn up detailed plans for providing each hospital management committee with a full consultant and specialist staff, calculating how many sessions would be required in a given area for medical, surgical, gynaecological and other specialities. Secondly, they had undertaken a detailed review of all members of the senior medical staff holding appointments in the hospitals and had given each man his " grading " either as consultant

(the salary for this post, if held whole-time, being £2,750 a year) or other subordinate category. These two tasks completed, it became possible to fit the pieces of the puzzle together, taking local needs and desires into account. By 1950 the outlines of the new plan and its implications for individual hospitals and individual medical men were established. In some areas it was possible to create a single integrated medical staff covering all the hospital units under the control of a hospital management committee; in others, circumstances dictated two or more separate units. Often one of the greatest problems lay in deciding which of the small hospitals should be placed at the disposal of the general practitioners of the neighbourhood, and how their work should be related to that of the main hospitals.

Though many general practitioners remained highly critical of the new arrangements, the general feeling in the hospitals was that the reorganization, administrative and medical, had led to vast improvements in the hospital services and that the more backward units were rapidly catching up in quality of work done with the more advanced hospitals; it was felt that the most marked disparities of standard formerly prevalent were beginning to disappear. (The aims of the new plan were described in a Ministry of Health booklet, *The Development of Consultant Services*, H.M.S.O., London, 1950.)

Sweden. In September a study tour of hospitals in Sweden was organized by the International Hospital federation. The study tour allowed 130 persons from various countries to obtain first-hand knowledge of Swedish hospital planning and construction and methods of organization and arrangements. The design of Swedish hospitals, in particular the large and recently established hospitals in Stockholm known as the Southern and the Caroline, attracted much attention in hospital circles all over the world. Though many features of these hospitals were much admired some of those participating in the tour formed the impression that, insufficient consideration had been given to size in relation to "man power," more especially nursing staff, and that, due to "trimmings," the cost involved, both capital and maintenance, was out of proportion to that actually required for the real purpose of a hospital. Arrangements were made by the International Hospital federation to hold a congress in Brussels in the summer of 1951. (A. G. L. I.)

United States. At the end of 1950 hospitals in the United States were feeling the effects of the Korean war, and were mapping future plans. The calling of doctors, nurses and other staff into the armed forces threatened to produce a shortage in hospitals similar to that existing during World War II, and interest increased in recruitment and in maximum use of existing staff.

Hospitals took an active role in planning for radioactive attack, which would involve joint utilization of hospital facilities in target areas, interchange of hospital staffs, supply problems and training of personnel. A national system of blood collection in which all hospital blood banks would take part, was formulated.

The effect of the war on new hospital construction was not yet certain. On June 30, construction for the year was expected to exceed the 1949 total by 71%. However, the trend towards decreased non-military expenditures led congress in August to cut the 1950-51 fiscal appropriation for the Hospital Survey and Construction programme from $150 million to $75 million. On Aug. 31, 1,476 Hill-Burton projects were on the books. Of these, 243 were completed and in operation, 808 under construction and the remaining 425 in preliminary stages of planning. The estimated total cost of all these was $1,016,700,543, with a federal share of $374,759,783. Full execution of projects on the books would add 71,821 hospital beds and 265 health centres.

The total book value of hospitals in the United States rose in 1949 to $6,945,805,000, according to the annual American Hospital association survey. Operating costs continued to rise. In general hospitals average daily costs mounted $1·24 a day in 1949, to a record level of $14·33 per patient-day. The average income of general hospitals, exclusive of gifts or endowments, was $11·74 a patient-day.

For care of indigent patients, city, county and federal governments paid general hospitals an average of $8·73 a day in 1950. Where payments were based on the government reimbursable cost formula, they averaged $12·88 a day.

Admissions were up 5·9% in 1949 to a new height of 17,821,765, though the percentage of occupancy was down from 87·9% in 1948 to 86·4% in 1949. The average length of stay also went down in 1949. For short-term hospitals, excluding federal, the average stay was 8·3 days in 1949, against 8·7 in 1948.

With the passage of H.R.6000 by congress in August, federal social security was for the first time made available to employees of non-profit organizations, including hospitals. The programme was to become effective on Jan. 1, 1951, and was expected to benefit appreciably the 434,585 full-time employees of non-profit hospitals in the nation.

Canada. Hospital construction continued at its peak rate through 1950. With federal and provincial assistance in health grants, 24,000 hospital beds were added since April 1, 1948, in more than 300 separate projects. The extension of supporting services and of staff training lagged because of the lack of financial support.

In the prepaid hospitalization area, Alberta served notice that it would extend its dollar-a-day municipal-provincial scheme to the whole province, by paying one-half of the non-taxpayer's annual premium. The volume of care had continued its upward trend under the compulsory plans in British Columbia and Saskatchewan, and there was a small reversal of the downward trend in length of stay. (*See* also NURSING.) (GE. BU.)

See *A Hospital Visitor's Manual*, issued by King Edward's Hospital Fund for London, 1950.

HOTELS, RESTAURANTS AND INNS. The feature of the year 1950 that most affected hotels, restaurants and inns in the majority of European countries was the continued encouragement given to all aspects of the tourist industry. By virtue of the key position which they hold in the tourist movement, these establishments became more important nationally; and governments tended to give them increasing recognition and assistance as an industry or a trade, so as to enable them to cater better for overseas visitors.

For instance it became the officially recognized policy in more than one country to grant preferential treatment, *e.g.* in the matter of essential goods still in short supply, to establishments concerned with tourists as against establishments off the tourist maps. With the exception, however, of a comparatively small number, the establishments which catered primarily for tourists were not easy to identify and in any case had to rely on a solid cushion of home trade in order to prosper.

Other trends affecting hotels, restaurants and inns during 1950 included the further decline in public spending, the steep rise in operating costs and the severer competition for guests, nationally and internationally.

In Great Britain the troublesome Meals in Establishments order, a legacy of World War II, was revoked. This ended a complicated structure of price, food and service controls on a meal.

The burden of the purchase tax, heavily felt by British hotels, after prolonged representations was alleviated to some extent by a government-approved scheme to refund some of

the tax in respect of those establishments which were considered to qualify as tourist hotels (an example of the preferential treatment for this class mentioned already).

The official scheme for the staggering of holidays which, if satisfactorily arranged, would enormously assist hotels, restaurants and inns, made no real headway during the year; it was obvious that some time had to elapse before the public could be persuaded to break with the firmly rooted tradition of regarding July and August as the real holiday months.

Dissatisfaction continued with the regulations arising from orders emanating from the wages boards established under the Catering Wages act, 1943. As a result a government committee of inquiry was set up to examine the working of the regulations. Amendments made during the year to those affecting licensed residential establishments were welcomed as such, but were regarded as inadequate. Unlicensed residential establishments at the end of the year remained, alone, unregulated, despite proposals which had long been under discussion.



A new joint hotel sign to be issued by the R.A.C., A.A. and R.S.A.C.

More attention was paid in 1950 to the important matter of hygiene in the preparation and handling of food.

The growing interest and eagerness with which hotelkeepers in all countries regarded the latest improvements in design, equipment and amenities in general were satisfactory to note. Meetings and conferences took place, in which problems were discussed and ideas exchanged: for example, a number of Irish hotelkeepers visited American hotels on a tour of inspection; and a party from Britain visited Europe, including the wine districts of France. The annual congress of the International Hotel association was held in Nice.

In most countries particular attention was given to training suitable candidates for jobs in hotels, restaurants and inns; and in Great Britain at least the Hotel and Catering institute, with its membership-qualification carrying the letters F.H.C.I., greatly helped to achieve professional status for the hotelkeeper, of which much had been heard in recent years.

As the year advanced there was a growing interest in the plans and preparations for the Festival of Britain in 1951: a new London Hotels Information service was set up at 47, Leicester square; and by the end of the year plans to accommodate many additional home and overseas visitors were well advanced. (H. C. Ce.)

United States. Ninety-two new hotels, costing more than $110 million, were under construction, planned or completed in the United States during 1950. These new hotels, 14 of which opened during the year, were located in 78 cities in 34 states, where surveys showed that because of population increases more hotel facilities were needed. They would provide a minimum of 12,736 additional guest rooms. Existing hotels added more than 1,500 rooms in 1950. The U.S. hotel industry, which was seventh in the country in point of invested capital, completed a five-year $2,000 million rehabilitation and modernization programme during the year.

More new hotels were planned or being built in the 12 cities of Texas than in any other state. However, the largest hotel—the Statler—was being built in Los Angeles, California. In Miami Beach, Florida, more guest rooms were being added than in any other city—its eight new hotels would provide 1,900 rooms.

Fifty-three of the new hotels were for transient visitors, 34 were resort hotels and 5 were residential. The latter, with their minimum number of suites were in Chicago (740), Washington (556), New York (525), Dallas, Texas (151), and Montgomery, Alabama (122).

The unused space of large lobbies was disappearing as they were being converted into such revenue-producing facilities as stores, showcases, coffee shops and restaurants. In smaller cities some oversize lobbies were being turned into community meeting rooms, readily convertible into banqueting rooms and ballrooms. Such lobbies were also turned into administrative offices, often adjoining the reception desk to give guests better service.

Many of the new and modernized hotels had separate auto-registration desks and private lifts that took motorists directly from their cars to their rooms without going through the main lobbies. The increase in automobile travellers caused many hotels in the centres of towns to provide garages, many of which had mechanics in constant attendance.

Over-all hotel occupancy dropped from an 84% national average in 1949 to 82% in 1950. However, by Oct. 1950 occupancy was at 86%, the same as in Oct. 1949. The 2% drop for the year's average was attributed by the American Hotel association to a decline in week-end business during the early months of the year. (*See* also Tourist Industry.)
(C. A. Hh.)

HOUSING. At Aug. 31, 1950, 1,241,972 new houses, flats and other units of accommodation for families had been provided in the United Kingdom since the end of World War II. Of this total, which included all forms of accommodation except temporary emergency accommodation, England and Wales had built 671,362 new houses and Scotland had built 81,752. In addition, local authorities had built 124,455 temporary houses in England and Wales, and 32,156 in Scotland. These are substantial figures by any test when it is remembered that much labour and material had to be diverted to the repair of war-damaged properties. At the end of World War II 4 million houses, one of every three in the United Kingdom, had suffered to a greater or less degree by damage from enemy bombing. Some of those which were totally destroyed had since been made good; those which had not been destroyed but which had been rendered totally uninhabitable had in the main been repaired, and the repair of unoccupied war-damaged dwellings accounted for 144,000 of the new units of accommodation provided since the war.

There was nonetheless, grave discontent at the housing position, and the housing shortage and the number of people on the waiting list in large and small towns alike represented one of the most formidable problems of postwar Britain. When the Labour party was returned to power in 1945 it had promised the electorate that it would create a Ministry of Housing. This proposal was not put into effect. That many members of the Labour party remained unconvinced that such a ministry would not be necessary was shown at the Labour party conference in the autumn of 1950 when this plea was rejected by Aneurin Bevan, minister of health. At the Blackpool conference of the Conservative party delegates were equally restive and won the acceptance by the party leaders of a minimum target of 300,000 houses a year as the party's policy.

Some of the delay in the production of new houses was due to the vastly improved standards both in space and in equipment of postwar houses. The average prewar local authority houses had a superficial floor area of 750 to 850 sq.ft.; the postwar house in the same category had a superficial floor space of over 1,000 sq.ft. This had unquestionably added to costs and to the time taken in building and, although concessions on this point were rejected by the political leaders responsible for house construction for several years, local authorities were in 1950 allowed to build a larger number of

houses of two rooms suitable for old people and of three rooms suitable for a married couple with one or two children.

The output of the building trade worker, although substantially better than in the immediate postwar period, still left much to be desired, but the increasing introduction of incentive bonuses was bringing good results in spite of the protracted opposition of the building trade unions. With the expansion of the armaments programme some labour and material was diverted from housing to war purposes.

One of the basic ideas in the postwar housing programme was that it would fit in with the general, declared government policy for the decentralization of population and industry. This policy received a severe set-back when Aneurin Bevan awarded special subsidies to local authorities that built multi-storey flats on expensive central sites. This put a premium on high density building and congestion in the central parts of cities with the result that flats being built in London and other large cities cost over twice as much as a house with equivalent accommodation built elsewhere. In only a few cases was the local authority able to provide a reasonable amount of open space. These flats were built at such a cost that they were uneconomic, but the subsidies for lifts and for high-cost land to some degree concealed this. In spite of the general policy of decentralization of population and industry, the number of houses erected in the new towns was, up to the end of 1950, less than 1,000. The new town development corporations necessarily had to undertake the preparatory work of dealing with long-term programmes for roads, sewers, water supplies and the other services generally before house building on a large scale could begin. But in spite of this there was a feeling of dissatisfaction with the progress that the towns had made in the previous four years. Again, the corporations had been persuaded by the Ministry of Town and Country Planning to adopt plans for houses at densities of 16, 18 and 20 to the acre, far in excess of densities considered desirable by the architects and sociologists employed by the corporations. This was to save agricultural land but many felt that the gains in this respect would be outweighed by the social defects of the housing provided.

From the aesthetic point of view postwar housing showed in a number of good estates very great improvement on the general aridness of municipal development between the wars. Where a local authority employed an architect of some distinction there were pleasant terraces and streets but many postwar housing estates were dreary and unimaginative both in architecture and lay-out. Some of the flats that were built even by local authorities that had a reputation for good work had all the traditional architectural characteristics of prisons.

The threat of a third World War and the dangers of atomic bombing again emphasized the simple considerations that had been put forward by most town planners in Britain for a very long time. The drive and energy necessary to divert the new industries to the new towns and get the houses up, in spite of the fact that many of those concerned with new towns possessed both drive and energy, was almost non-existent. The powers which the government enjoyed for the control of the location of industry, under the Distribution of Industry act, 1944, applied only to the former " distressed areas " such as South Wales, Clydeside and Tyneside, called " development areas." To these development areas a large number of new factories had moved from London and the other congested centres. But even there, there had been little regard for



In 1950 the Ministry of Health issued medals and diplomas for the best local authority housing schemes completed between 1945 and 1949. One of the schemes to receive the awards was the Wells House, Hampstead, London, (above) designed by C. H. James. The medal (inset) was designed by T. H. Paget.

planning considerations. Factory estates, themselves excellent and harmonious, providing a good environment at work, had been built without relationship to housing estates and with a complete disregard to the new towns policy. The Labour government had put into law a volume of town-planning procedure based on the soundest town-planning principles. But the fact remained that London and the other large cities had continued to grow and had continued to spread into the scanty green belts while central congestion grew at a pace far more rapid than the accommodation in the new towns, which were expressly conceived for the purpose of relieving sub-central congestion.

After the general election, Hugh Dalton succeeded Lewis (later Lord) Silkin as minister of town and country planning. No new legislation was introduced, but a number of arrangements were made providing for the exemption from the incidence of development charges in certain instances where clearly the amount to be collected was small and the irritation was great. For example, the division of houses into separate dwellings was made exempt, provided that one house was not converted into more than three separate dwelling houses. Nor did the conversion of a house into a fried fish shop, a tripe shop, a shop for the sale of dogs' or cats' meat, attract any development charge.

Belgium. Belgium's first efforts at reconstruction after World War II were not directed to the provision of houses, and it was not until 1948 that a substantial programme of house-building was planned. As a result only 11,000 houses had been built but this was quite out of proportion to the need. Most of these 11,000 houses were in large apartment houses available only to those who could afford high rents.

France. When the war ended, France found herself with 1,450,000 houses which had been made uninhabitable. When slum and overcrowded dwellings were taken into account, there was an urgent need for 1,800,000 new dwellings. In Oct. 1950, 90,380 new houses had been completed since the country's liberation, and at the end of 1949, 60,000 war-damaged dwellings had been repaired and made habitable.

Germany. The need for houses in Western Germany alone was estimated at 5 million and there were still in 1950 2,250,000 houses destroyed during World War II which were waiting to be rebuilt. Between 180,000 and 200,000 houses were built in 1949, and it was hoped that this figure would be surpassed by 25% in 1950.

Netherlands. In May 1947 the housing shortage in the Netherlands was estimated at 300,100 dwellings which meant that 13·5% of the population needed houses. In 1948, with the completion of 36,000 houses an equilibrium was established and the shortage was prevented from becoming worse. A modest overhauling of arrears began in 1949. Up to April 1, 1949, 57,000 new permanent dwellings were completed and 8,517 temporary buildings erected since 1946. Of 40,700 houses severely damaged about 39,000 had been repaired.

Sweden. During the war there was an almost complete collapse of Sweden's building programme and in 1941 building activity was only a quarter of what it had been in 1939. The government intervened increasingly and loans became available so that house building had by 1945 reached the prewar level. House construction from 1940 to 1948 provided 415,000 dwellings.

U.S.S.R. At the end of World War II the U.S.S.R. was faced with a re-building programme of formidable dimensions. In the first three years of the first postwar Five Year plan 1,600,000 houses were restored or newly built in the rural areas of the Soviet Union, while 407,000 houses were built for collective farmers. (G. McA.)

United States. All records for home building in the U.S. were completely overshadowed in 1950 when work was started on 1,395,600 new family dwelling units of all types, exclusive of farm housing. The 1949 record total of a little more than a million new homes was exceeded by 36%. Aided by favourable weather the boom, which began in the latter half of 1949, continued through the winter months. May, with the start of 149,100 new homes, set the high point. By this time it had gathered such momentum that the outbreak of war in Korea and the imposition of increasingly restrictive government regulations had little braking effect. Steadily mounting construction costs and the spectre of material shortages likewise failed to exert any substantial retarding effect until late in the year. The average construction cost of privately built one-family houses started in the first quarter of 1950 was estimated by the Bureau of Labour at $7,950 as compared with $7,525 in the preceeding year. By the third quarter of 1950 the figure had climbed to $8,975. These estimates did not include land and development cost or profit on the sale of the house.

In the Housing act of 1950 the main emphasis was on stimulating the construction of lower-price homes and to this end provision was made for the insurance of 30-yr. mortgages up to 95% on $5,000 homes in outlying areas. The former $2,250 million revolving fund maximum for mortgage insurance under former acts was increased to $9,000 million. Incentive emphasis also was placed on lower-price homes by modifying the insurance formula so as to favour the lower end of the bracket. The most radical innovations in the act dealt with multi-family rental housing, an area in which the lawmakers faced two difficult problems: (1) how to answer a well-organized demand from labour unions, civic, housing and welfare groups for direct government low-interest loans and other aids to non-profit co-operatives on the Scandinavian pattern; and (2) how to meet the still acute housing needs of moderate income families, particularly in metropolitan areas. Private enterprise opposition to the government co-operative programme was powerful, well organized and insistent. In a preliminary skirmish at the previous session the plan had been defeated. At the last session of congress the proposal was again defeated, this time even more emphatically, in the face of all the pressure the administration could bring to bear. The one point on which the lawmakers agreed was that the rental housing provision of the temporary liberal credit war emergency programme would not be renewed.

The result was a compromise on all points. An additional $500 million of mortgage insurance authorization was approved to cover the back-log of project applications filed before the expiration but after the exhaustion of previously authorized funds. The rental housing section of the permanent programme was liberalized so as to permit the insurance of mortgages up to 90% of value on the first $7,000 of cost per apartment and 60% on the balance up to $3,000 of cost. The credit incentives were designed again to favour the construction of lower-cost housing and to require less investment from the builder-developer than previously.

A co-operative housing programme was also included, but with the insured mortgage type of financing rather than direct government low-interest loans or other direct government participation. Mortgage insurance of 95% was provided on projects costing up to $5 million were 65% or more of the co-operators were veterans of World War II. Other co-operative developments could get between 90% and 94% insured mortgages depending upon the proportion of veterans participating in the venture.

In late June, the war in Korea set the stage for radical changes in the housing outlook. The first federal action came on July 18 when President Truman called for ten curtailments of federal housing and credit aids to conserve construction materials for defence needs and to check inflation. Mortgage credit was to be tightened by reducing maximum allowable amounts; discontinuing 100% G.I. loans, and requiring cash payments of at least 5%; prohibiting the

inclusion of inflationary costs in fixing values for mortgage purposes; slowing up secondary mortgage market operations of the Federal National Mortgage association; and reducing credit availability from the Federal Home Loan Bank administration to retard saving and loan association operations. These curbs were followed on October 12 by further restrictions on home mortgage credit. Required cash payments were pegged at from 10% on the lowest price house to 50% in the $25,000-and-over category. Veterans could purchase with about 5% less cash than non-veterans, but every purchaser had to have his own cash for the deposit payment: that could not be borrowed.

Rent control ended for 4 million of the nation's dwelling units during the year under provisions of the Housing and Rent act of 1950. By its terms all federal control would have ended on Dec. 31, except for those localities that voted its continuance before that date, in which case it might be extended to June 30, 1951. As a result of the defence emergency the Dec. 31 deadline was extended to March 31, 1951, to enable the new congress to re-study the need for continued controls. The activation of military establishments brought the restoration of rent controls to a number of localities which had already been released. As the year drew to a close the housing outlook was under close study in terms of defence emergency needs. The expectation was that home-building would be restricted increasingly to military or war industry needs, and plans were being made for a new defence housing emergency programme. (*See* also ARCHITECTURE; BUILDING AND CONSTRUCTION INDUSTRY; LOCAL GOVERNMENT; TOWN AND COUNTRY PLANNING.

(H. M. P.)

HUNGARY. People's republic of southeastern Europe bounded W. by Austria, N. by Czechoslovakia, E. by Rumania and S. by Yugoslavia. Area: 35,893 sq.mi. Pop.: (1938 est.) 9,021,000, (Dec. 31, 1948, census) 9,201,158. Language: (1947 est.) Hungarian 92·9%, German 5·1%, Slovak 0·8%, Serbo-Croat and Slovene 0·6%, Rumanian 0·2%. Religion: (1947 est.) Roman Catholic 65·6%, Greek Catholic 2·5%, Calvinist 20·8%, Lutheran 6%, Greek Orthodox 0·4%, Jewish 4·3%. Chief towns: (1941 census) Budapest (cap., 1,164,963; 1948, 1,058,288); Szeged (136,752); Debrecen (125,933); Miskolc (109,433); Kecskemét (87,269); Pécs (78,512). Chairmen of the presidium of the people's republic in 1950, Arpád Szakasits and, from April 26, Sándor Rónai; prime minister, István Dobi.

History. The president of the republic, Arpád Szakasits, resigned on April 26, 1950, and was suceeded by Sándor Rónai, who was formerly minister of trade and was, like Szakasits, a collaborationist Social Democrat. In February there was a cabinet reshuffle. István Kossa was replaced as minister of finance by Gyula Olt, Gyula Ortutay as minister of education and religious affairs by József Dárvas, and Dárvas as minister of building by László Sándor. As consolation prizes, Ortutay was appointed chairman of the Central Office of Museums and Monuments, while Kossa became president of the National Wages committee, a post for which his previous experience as a trade union leader no doubt qualified him. This change was a definite disgrace for Ortutay. The activity of his minister during his tenure was attacked on April 16 by Arpád Házi, head of the State Control centre, the body which examined the efficiency and orthodoxy of government departments. Házi accused the ministry of the sin of "soulless and formalistic bureaucracy." Another change which took place in February was that József Révai gave up the editorship of the Communist party's official daily, *Szabad Nép*, and became deputy general secretary of the party. In this post it seemed likely that he would take over a good deal of the duties of the general secretary, Mátyás Rákosi. In Aug. 1950 another change was announced: György Marosán was replaced as minister of light industry by Arpád Kiss.

In February the Hungarian police was reorganized. A new body was set up, the State Security organization. It was to be responsible, not to the Ministry of the Interior but to the cabinet as a whole. The minister specially responsible for its supervision was to be János Kádar, who at the same time gave up the office of minister of interior, in which he was succeeded by Sándor Zold. The new organization was to be formed from the fusion of the former security department of the Ministry of Interior with the Frontier Guards force. The commander of the new armed forces of the interior was to be Lieut. General Gabor Péter, hitherto head of the former department.

Friction between government and Catholic Church once more became acute in May, when the bishops refused to sign the international Communist-organized "Stockholm peace appeal." In a speech to the central committee of the party, Révai attacked the hierarchy, making the usual Communist propaganda distinction between the bishops and the "honest clergy." He declared that 11,500 members of monastic orders in Hungary were a menace to the state, as they "travel up and down the country as imperialist agents and reactionary rumour-mongers." He insisted that all party members must renounce religion and that no party official must allow his children to receive religious instruction at school. In the following months special attacks were made by official propaganda on Bishop Péteri of Vác, who had summoned before an ecclesiastical court some priests of his diocese who had supported the "peace campaign." The bishop was personally denounced by the minister for religious affairs, Dárvas.

At the end of August, however, it was announced that an agreement had been made between the Catholic hierarchy and the government. It followed lines rather similar to those of the agreement reached in Poland (*q.v.*) earlier in the year. It was signed for the government by Dárvas, for the hierarchy by Archbishop Groesz of Kálocsa. The church recognized the form of the state and the constitution; condemned all subversive action; declared that religion must not be abused for political aims or "anti-state purposes"; appealed to the faithful to support the five-year plan; warned the clergy not to oppose the movement for the formation of agricultural producers' co-operatives; and promised its support to the "peace campaign." On its side the government guaranteed freedom of religious belief and free religious activity for the Catholic Church; promised to restore eight schools to the church and to permit the employment in them of sufficient educational staff; and promised money grants to the church at a diminishing rate for the next 18 years.

During the year the pace of collectivization of agriculture was quickened. Teams of peasants were sent to the Soviet Union to study *kolkhoz* methods, so as to serve as propagandists on their return. A special drive began in the late summer. The Communists' chief economic planner, Ernö Gerö, in a speech to peasants returned from Russia on Aug. 22, said that the number of peasant families belonging to collective farms in Hungary, at present 70,000, must be rapidly increased. "During these ten days," he said, "we have to persuade not a few hundreds but a few tens of thousands of men and women and families voluntarily to join the co-operatives." As a result of this drive, Premier István Dobi was able to announce on Sept. 9 that a further 35,000 families had joined. The collectivization drive was combined with increased repression of better-off peasants and "harvest saboteurs." (*See* also PEASANT MOVEMENT.)

A decree of Jan. 27 on labour discipline provided heavy penalties for both wilful damage and negligence to state

property in factories. A congress of Hungarian stakhanovites was held at the end of February, addressed by Rákosi and Gerö. It was claimed that in the last year innovations in methods of production, proposed by the workers themselves, had saved the state F. 340 million. An industrial conference at the end of May however showed a less happy picture. The manager of the Rákosi (formerly Manfred Weiss) metallurgical works in Budapest denounced malingering by the workers and the too kind-hearted attitude of National Health service doctors. Gerö in a speech to the central committee of the party on May 31, complained of "undisciplined consumption" by the workers. "If the standard of living rises more rapidly than productivity," he said, "then we partly consume today the factories, enterprises and machines which are meant to raise our standard of living at a much greater pace tomorrow, to strengthen the peace front and to consolidate our future." In order to prevent this, and to make clear the meaning of the last two euphemisms, Gerö recommended that labour discipline be greatly tightened, norms of production be raised, and large-scale enlightenment work be conducted among the workers by party organizations and the party press. The same theme occurred in a resolution by the party's central committee (July 26) which criticized the leaders of the trade unions for "underestimating the leading role of the party in the union," for shirking "implementation of tasks which might be unpopular with the workers," and for tolerating right-wing Social Democrats. It alleged that the union leaders were "bureaucratic" and "cut off from the masses."

A new nationalization decree of Dec. 28, 1949, had made possible the expropriation of the remaining foreign (Allied) business concerns in Hungary. This was followed by the trial of Edgar Sanders and Robert Vogeler, respectively British and American business men, for espionage. They were condemned to long periods of imprisonment after making public confessions. During their weeks of preliminary imprisonment they had not been allowed to see the British or U.S. consuls. As a reprisal for this attitude the British government broke off commercial negotiations with Hungary. (*See* also EASTERN EUROPEAN ECONOMIC PLANNING.) (H. S.-W.)

Education. Schools: (1950-51): elementary 6,185, pupils 1,229,957, teachers 36,819; secondary 389, pupils 94,046; universities and institutions of higher education 21, students 31,000, professors and lecturers 7,113. Illiteracy (1941) 6·0%.

Agriculture. Main crops ('000 metric tons, 1948): wheat 1,583; maize 2,862; barley 692; oats 334; rye 786; rice 37; sugar, raw value (1949) 265; potatoes (1949) 2,585; linseed (1949) 10; tobacco (1948) 27. Livestock ('000 head): cattle (1948) 2,004; sheep (spring 1949) 650; pigs (May 1949) 2,677; horses (Feb. 1949) 569.

Industry. Fuel and power: coal and lignite ('000 metric tons, 1948; 1949, six months, in brackets) 10,620 (5,528); electricity (million kwh., 1946) 1,162; crude oil ('000 metric tons, 1949; 1950, six months, in brackets) 510 (225). Raw materials ('000 metric tons, 1947; 1948, six months, in brackets): iron ore, iron content 61; pig iron 345 (179); crude steel 719 (371); bauxite 374 (169); manganese ore 127 (63). Manufactured goods (1947; 1948, six months, in brackets): cement ('000 metric tons) 281 (73); cotton piece-goods (million metres) 148 (79); woollen piece-goods (million metres) 13 (7).

Foreign Trade. (Million forints, 1948) imports 1,975; exports 2,965.

Transport and Communications. Roads (1949): 10,248 mi. Licensed motor vehicles (Dec. 1949): cars 16,000; commercial 15,000. Railways (1949): 4,773 mi.; passenger-mi. (1948) 2,983 million; freight net ton-mi. (1948) 2,036 million; freight carried ('000 tons, 1948) 21,936. Danube shipping (Dec. 1947): merchant vessels 514; total tonnage 118,717. Telephones (1948): subscribers 106,768. Wireless licences (Dec. 1948): 475,000.

Finance and Banking. (Million forints) budget: (1950 est.): revenue 17,537, expenditure 17,454. Currency circulation (Feb. 1949; Feb. 1950 in brackets): 2,888 (2,805). Bank deposits (Feb. 1949; Feb. 1950 in brackets): 4,625 (6,914). Monetary unit: *forint* with an official exchange rate of F. 32·87 to the pound and F. 11·74 to the U.S. dollar.

HUTCHINS, ROBERT MAYNARD, U.S. educationist (b. Brooklyn, New York, Jan. 17, 1899), left Oberlin college, Oberlin, Ohio, in 1917 to enlist in the U.S. ambulance corps. Entering Yale university in 1919, he received his A.B. in 1921 and his LL.B. (*magna cum laude*) in 1925. In 1923 he was appointed secretary of Yale university and in 1927 dean of its law school. In 1929, at the age of 30, he became the fifth president (and, in 1945, the first chancellor) of the University of Chicago.

The resignation of Hutchins as chancellor of the university, and as a member of its board of trustees, to become an associate director of the Ford foundation, a philanthropic trust, was announced Dec. 19, 1950. Hutchins had served as the administrative head of the university for almost 22 years, a period longer than that of any of his predecessors. He also was senior in point of service among the contemporary heads of any of the principal U.S. universities and colleges. His resignation was to become effective at the end of the university's academic year, June 30, 1951, unless a successor was appointed earlier. He was however, granted a leave of absence from Jan. 1, 1951, to participate in the formulation of the foundation's policies. Hutchins continued as chairman of the board of editors of Encyclopædia Britannica, Inc.

University administrative responsibilities largely occupied Hutchins during the year. As in the past, much of his efforts was concerned with obtaining additional financial support for the university. The total of funds pledged to the university in 1950 was approximately $4 million.

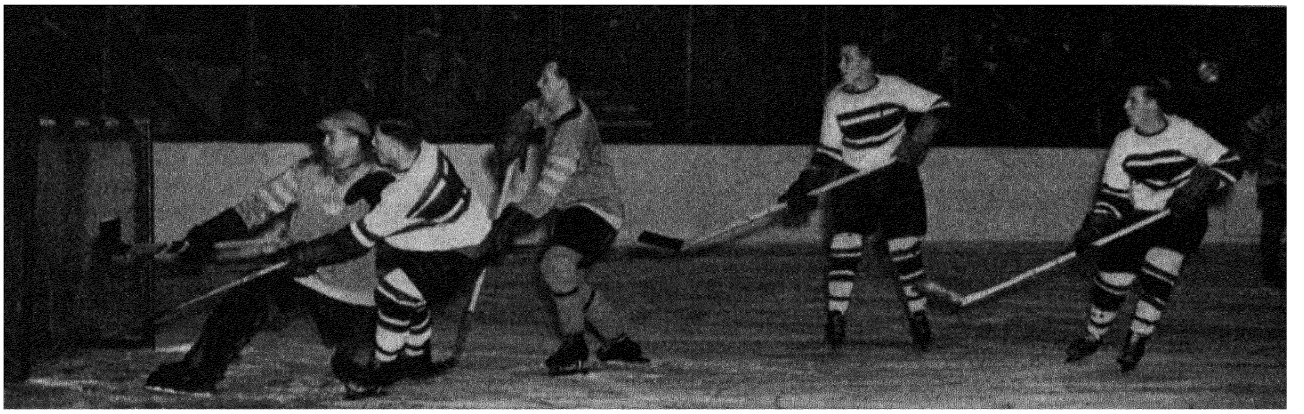
During May, Hutchins was abroad in England, where he visited Oxford, and in the Scandinavian countries, speaking at the University of Stockholm, which had conferred the honorary LL.D. degree upon him *in absentia* in 1949, and at the University of Lund, Sweden. (W. V. M.)

ICE HOCKEY. The highlight of the 1950-51 season was the world and European championships held in London in March 1950. The last-minute cancellation of the Czechoslovakian team was a great disappointment especially as they were the holders of the world and European titles. Canada gained the world title; the United States was second. Switzerland won the European title, Great Britain being the runner-up. Seven teams competed in the senior English competitions. Harringay Racers won the Autumn cup on Oct. 4 with Wembley Monarchs as runners-up, and Streatham won both the national tournament and the National league with Wembley Monarchs as runners-up in both competitions. There were only six teams competing in senior competitions during the season. Six teams competed in the intermediate tournament which was won by the R.A.F.; Wembley Terriers were runners-up. Four teams played in the Junior league which was won by Wembley with Streatham as runners-up. The second annual Northern Amateur tournament was played at Durham rink. The two final teams in this tournament were Durham Wasps and Paisley Wildcats, Durham finally winning.

In Scotland the Autumn cup was won by Dundee Tigers with Fife Flyers as runners-up. The Canada cup was won by Fife Flyers with Dunfermline Vikings as runners-up. The National league was won again by the Fife Flyers with Dunfermline Vikings as runners-up, and the play-offs for the Anderson cup were won by Falkirk Lions, Fife Flyers being runners-up. (J. F. A.)

United States and Canada. A powerful band of Detroit Red Wings successfully defended the championship of the National Hockey league in 1950 and then went on to win the Stanley cup. The Wings narrowly escaped elimination in the semi-finals at the hands of the Toronto Maple Leafs, who had beaten the Wings in eleven straight play-off contests in three years. The Wings won by 4 games to 3. New York's surprising Rangers, fourth in the regular league campaign, eliminated Montreal by 4 games to 1 to reach the final play-offs, when they were beaten by Detroit Red Wings, 4 games to 3.

Other champions included; American Hockey league,



The Swedish goalkeeper clearing a British attack in a world championship event, London, March 1950.

Indianapolis Caps; U.S. Hockey league, Minneapolis Millers; Pacific Coast Hockey league, New Westminster Royals; Amateur Hockey Association of the U.S. (eastern), Chatham Ontario Maroons; Amateur association (western) Spokane, Washington Flyers; Eastern league, New York Rovers; International league, Chatham Maroons; Allan cup, Toronto Marlboros; Memorial cup, Montreal Junior Canadians; National Collegiate Athletic association, Colorado college, Colorado Springs; Canadian inter-collegiate, Montreal. (T. V. H.)

ICELAND. Island republic of the north Atlantic. Area: 39,768 sq.mi. Pop.: (1940 census) 121,474; (Dec. 1949 est.) 141,042. Language: Icelandic, closely akin to Old Norse. Religion: Lutheran. Capital, Reykjavik, the only large town (pop., 1949 est., 54,707). President of the republic, Sveinn Björnsson; prime ministers in 1950, Olafur Thors and (from March 14) Steingrímur Steinpórsson.

History. Economic conditions continued to cause anxiety in 1950. The summer herring season had again, for the sixth consecutive year, gone badly; the sale of fresh fish on ice to Great Britain and Germany fell off, making it imperative to re-introduce the curing of salt fish for the Mediterranean market. From the end of June until the early part of November the trawler fleet remained idle for 129 days because of a strike.

The Conservative minority government, formed on Dec. 6, 1949, was unable to obtain a majority support in the Althing for the devaluation of the króna; and it resigned early in March. On the 14th a new Conservative-Progressive (Agrarian) coalition cabinet was formed and the króna, which on Sept. 19, 1949, followed the devaluation of the pound sterling by 30·5% to the U.S. dollar, was again devalued on March 20 by 42·6% to both the pound and the dollar. During the first two years of the E.R.P. (April 1948-March 1950) Iceland received a total aid amounting to $10·9 million.

The national theatre at Reykjavik was completed and opened in April. Two new Icelandic plays were produced there during the year: *Íslandsklukkan* by H. K. Laxness, and *Jón Arason* by T. Sveinbjörnsson, a historical drama; the latter was also produced at the Royal theatre in Copenhagen. (H. Jn.)

Education. Schooling from 7 to 15 is compulsory. Schools (1949): elementary 216, pupils 16.000, teachers 600; secondary 46, pupils 4,200, teachers 300; technical 44, pupils 3,570, teachers 359. University of Iceland (1950): students 600, professors and lecturers 50.

Livestock and Fisheries. Livestock (Jan. 1948): sheep 454,255; cattle 41,633; horses 46,106; poultry 117,083. Fisheries: total catch (metric tons, 1949; 1950, six months, in brackets): 394,200 (168,741).

Foreign Trade. (Million krónur, 1949; 1950, six months, in brackets.) Import 424·3 (220·4); export 289·2 (142·7). Main sources of imports (1949): U.K. 26·9%; U.S. 16·8%; Denmark 10·4%; Italy 4·8%. Main destinations of exports: U.K. 36·0%; Germany 22·9%; U.S. 6·2%; Italy 5·4%.

Transport and Communications. Iceland has no railways. Roads (1949): 3,728 mi. Licensed motor vehicles (Dec. 1949): cars 6,119; commercial 4,486. Shipping (July 1949): number of merchant vessels of 100 gross tons and over, 134; total tonnage 72,862. Air transport (1948): km. flown 2,320,500, passengers flown 48,613. Telephones (1947): 16,500. Radio receiving sets (1949): 34,692.

Finance and Banking. (Million krónur) Budget: (1950 actual) revenue 298, expenditure 262; (1951 est.) revenue 287·5, expenditure 246. National debt (Dec. 1950): internal 148, external £2 million. Currency circulation (Sept. 1949; Sept. 1950 in brackets): 186 (198). Bank deposits (Sept. 1949; Sept. 1950 in brackets): 150 (216). Monetary unit: *króna* (pl. *krónur*) with the following exchange rates:

	Before Sept. 19, 1949	*From Sept. 19, 1949*	*From March 20, 1950*
To the £	Kr. 26·22	Kr. 26·22	Kr. 45·61
To the U.S. $	Kr. 6·50½	Kr. 9·36½	Kr. 16·29

ICE SKATING. In the season 1949-50 the world championships in figure skating and an international ice dance competition were held at Wembley, Middlesex. The men's world title was won for the third successive year by R. Button (U.S.A.); the ladies' for the second time by A. Vrzanova (Czechoslovakia), with J. Altwegg (Great Britain) runner-up; and the pairs by M. Kennedy and Miss K. Kennedy (U.S.A.). An American pair, M. McGlan and Miss L. Waring won the ice dance competition.

The European championships in figure skating were held in February in Oslo: E. Kiraly (Hungary) won the men's event, A. Vrzanova the ladies', L. Nagy and Miss M. Nagy (Hungary) the pairs.

The British championships in figure skating in the international style, held at the Empress hall, Earl's Court, resulted in M. Carrington's winning the men's title for the first time and J. Altwegg's holding the ladies' for the third year in succession; the pairs championship was retained by J. Nicks and his sister, Miss J. Nicks, also for the third successive year. In the professional championships of Great Britain held at the Queen's Ice Skating club, London, H. Alward was successful among the men and C. Bosley and Miss J. Bosley among the pairs. There were insufficient entries for the ladies' championship to be held.

The world championships in speed skating for men, held at Eskilstuna, Sweden, was won by H. Andersen (Norway), who also won the European speed championship held in Finland. The ladies' championship of the world in speed skating, instituted in 1936, was won for the third year in succession by M. Isakova (U.S.S.R.). (E. G. Cs.)

North America. In 1950 Richard Button of Englewood, New Jersey, won the national figure-skating championship in Washington for the fifth consecutive season. Mrs. Yvonne Sherman McGowan of New York city successfully defended her women's senior title.

A list of other U.S. title winners follows: Karol Kennedy and Peter Kennedy, Seattle, senior pairs; Lois Waring and

Mike McGean, Baltimore, gold dance team; Carol Ann Peters and Daniel Ryan, Washington, silver dance team; Donald Laws, Washington, junior men; Tenley Albright, Boston, junior women. Ray Blum, Nutley, New Jersey, successfully defended his Middle Atlantic and North American outdoor speed-skating titles; Ken Bartholomew, Minneapolis, won the national outdoor title.

Roger Wickson, Vancouver, won the Canadian national men's figure-skating title and Suzanne Morrow, Toronto, the women's title.

IFNI: *see* SPANISH COLONIAL EMPIRE.

IMMIGRATION AND EMIGRATION. Great Britain. As in all previous years since the end of World War II, in 1950, movements out of the United Kingdom greatly exceeded movements in. Estimated emigration figures stood at about 485,000 to all extra-European destinations but mainly to the Commonwealth countries. Schemes for bringing in alien workers, like the "Westward Ho" scheme for displaced persons and the "North Sea" scheme for German and Austrian women for nursing and domestic services, ceased though individual aliens were being admitted. A further 2,000 displaced persons who had relatives or friends to vouch for them were admitted and a plan was made for the admission of 2,600 Poles from the middle east.

Australia. The immigration policy of the Menzies government was continued under H. E. Holt, minister for labour and immigration, who restated the policy with a 10-year programme to build up Australia's population to more than 10 million by 1960. For 1950 the target was 200,000 new settlers from all sources of whom one half were to be British. Of these 70,000 came under the free and assisted passages scheme. Since there was a natural tapering off of personal nominations, the government decided to fill up the quota with selected British migrants (some 37,000). Another 50,000 entrants were displaced persons from Europe, while the target for Dutch immigrants was 10,000 including young Dutch service men from Indonesia. About 40,000 foreign immigrants were nominated and in addition the assisted passages scheme continued for Commonwealth and Allied ex-servicemen and for Maltese and Irish immigrants.

New secondary industries were being started and a planned system of de-centralization of industry was bringing new life to small country towns and helping in the healthy distribution of new settlers. Large scale development plans, irrigation schemes and the exploitation of natural resources needed, however, large investments which might or might not be made, since they depended upon world developments not under Australia's sole control.

New Zealand was taking fewer new settlers but had small schemes for selected immigrants and for absorbing children from the United Kingdom.

Germany. At the beginning of 1950 some 37,000 displaced persons, neither repatriable nor capable of being re-settled under International Refugee organization schemes, were accepted into the economy of Western Germany.

In February the speaker of the *Bundestag* stated that within the preceding 15 months nearly 600,000 migrants had entered Western Germany from the Soviet zone. Since then the influx had continued and something like 300 to 400 political and non-political refugees crossed the east-west frontiers daily. About 20,000 Germans were accepted from Czechoslovakia. In March there was a threat of expulsion of all Germans still living in Poland. An attempt was made to limit this movement to the admission of 25,000 who were to be admitted to the British zone under a formal agreement made in Nov. 1949. The German federal government made repeated requests for extension of the categories of persons to be admitted and in April the Allied High commission agreed that in addition to the 25,000 on the agreed list, admission could be granted to their dependants, those in possession of special permits issued by the Combined Travel board in Warsaw, those who had residence permits for any of the three western zones and those refugees named on special lists supplied by the U.S. and French occupation authorities.

(B. L. B.)

United States. Alien and citizen entries into the U.S. totalled more than 90 million at 468 land, air and seaports in the year ended June 30, 1950. Of these entries 97% were of alien and citizen border crossers, who may have made numerous entries across the Canadian and Mexican borders. The 249,187 immigrants who entered the U.S. in 1950 constituted the largest number admitted in any single year since 1929. Half of them, more than 124,000, were admitted under the Displaced Persons act of 1948. Other quota immigrants numbered 73,340, while 51,727, chiefly the wives of U.S. citizens and natives of western hemisphere countries, entered as non-quota immigrants. The 73,340 quota immigrants who were not displaced persons, added to the quota displaced persons, brought the total quota immigration to 197,460, thereby exceeding the annual authorized quota of 154,206 by 28%. The principal countries of birth of immigrants are reported in the table.

TABLE. IMMIGRANT ALIENS ADMITTED TO THE U.S. WITH PRINCIPAL COUNTRIES OF BIRTH.

	Admitted	Quota
All countries	249,187	197,460
Europe	206,547	191,114
Germany	31,225	26,990
Great Britain	12,188	11,700
Italy	9,839	5,829
Latvia	17,494	17,433
Lithuania	11,870	11,751
Poland	52,851	51,820
U.S.S.R.	10,971	10,789
Yugoslavia	9,154	8,939
Other Europe	50,955	45,863
Asia	4,020	2,232
Canada	18,043	—
Mexico	6,841	—
West Indies	6,093	2,675
Central America	2,151	103
South America	2,777	201
Other countries	2,715	1,134

SOURCE: U.S. Department of Justice Immigration and Naturalization service.

During the fiscal year there were 456,689 aliens (exclusive of border crossers, Mexican agricultural labourers and crews) who departed from the U.S. Only 27,598 were emigrants; that is, aliens who left a permanent residence in the U.S. for a permanent residence abroad; 48,054 of the non-emigrants were resident aliens who planned to return to the U.S. after a temporary stay abroad and 381,037 were aliens who had been admitted as visitors, persons in transit and others temporarily admitted. (*See* also ALIENS; REFUGEES.)

(W. B. MI.)

INCOME AND PRODUCT: *see* NATIONAL INCOME.

INDIA. Republican self-governing member of the Commonwealth of Nations in southern Asia, a union of states. Area: 1,220,099 sq.mi. Pop.: (1941 census) 318,770,000; (March 1950 est.) 347,340,000. Language: two main groups, Aryan or northern (incl. Hindi, used by 150 million; Bengali, 26 million; Marathi, 23 million; and Gujarati, 15 million) and Dravidian or southern (incl. Telugu 30 million; Tamil 24 million; Kanarese 14 million); English is the official language of the union, to be displaced by Hindi in the Devangari script by 1964. Religion: Hindu; Moslem, Christian, Sikh, Buddhist, Parsee, Jewish and other minorities. Chief towns (1941 census): New Delhi (*q.v.*, cap., 521,849);

Calcutta (2,108,891); Bombay (1,489,883); Madras (777,481); Hyderabad (739,159); Ahmedabad (591,257); Cawnpore or Kanpur (487,324); Amritsar (391,010); Lucknow (387,177). President, Rajendra Prasad (*q.v.*); prime minister, Jawaharlal Nehru (*q.v.*).

	Area (sq.mi.)	Population (March 1950 est.)	Capital
Part A (governor's) states			
Madras	126,166	54,290,000	Madras
Bombay	76,443	32,680,000	Bombay
West Bengal	29,066	24,320,000	Calcutta
Uttar Pradesh*	107,143	61,620,000	Lucknow
Punjab	37,058	12,610,000	Chandigarh‡
Bihar	69,745	39,420,000	Patna
Madhya Pradesh†	98,575	20,920,000	Nagpur
Assam	50,296	8,510,000	Shillong
Orissa	32,198	14,410,000	Bhuvaneshwar
Part B (rajpramukh) states			
Saurashtra	17,725	3,960,000	Rajkot
Rajasthan	128,424	14,690,000	Jaipur
Madhya Bharat	46,353	7,870,000	Gwalior
Patiala—East Punjab	10,099	3,320,000	Patiala
Travancore-Cochin	9,155	8,580,000	Trivandrum
Hyderabad	82,313	17,690,000	Hyderabad
Jammu and Kashmir	82,258	4,370,000	Srinagar
Mysore	29,458	8,060,000	Bangalore
Part C (centrally administered) states			
Vindhya Pradesh	24,610	3,880,000	Rewa
Himachal Pradesh	10,600	1,080,000	Simla
Kutch	8,461	550,000	Bhuj
Bilaspur	453	130,000	Bilaspur
Bhopal	10,088	850,000	Bhopal
Tripura	4,116	580,000	Agartala
Manipur	8,620	540,000	Manipur
Coorg	1,593	170,000	Mercara
Ajmer	2,400	730,000	Ajmer
Delhi	574	1,510,000	New Delhi
Part D territory			
Andaman and Nicobar islands	3,143	17,000	Port Blair

* Formerly United Provinces. † Formerly Central Provinces.
‡ Proposed.

History. On Independence Day, Jan. 25, 1950, India was formally proclaimed as a sovereign democratic republic under the constitution drawn up by the Constituent Assembly. India severed its allegiance to the Crown, recognizing it merely as a link uniting the members of the Commonwealth of Nations. Rajendra Prasad was unanimously elected first president. He was a devoted disciple of Mahatma Gandhi and had been three times president of the Indian National Congress and chairman of the Indian National Assembly. Independence Day was celebrated throughout India with public rejoicings, and in his inaugural speech the president said that for the first time in its long and chequered history the whole vast land found itself united under one jurisdiction and one union. The objectives of the new government would be to secure justice, liberty and equality among its citizens, abolish disease, poverty and ignorance, re-settle displaced persons and develop natural resources. In London, the India league held a meeting attended by representatives of all parties in the British parliament, and Clement Attlee, the prime minister, welcomed the new republic as a member of the Commonwealth. Telegrams were received from rulers all over the world, including one from King George VI.

At the Commonwealth conference held at Colombo in January, Jawaharlal Nehru, the Indian prime minister, said that India would not align herself with any power *bloc* but would co-operate with the other members of the Commonwealth in the preservation of world peace and the economic and industrial development of southeast Asia. On Jan. 30, the second anniversary of the death of Gandhi was celebrated as a day of national mourning. Nehru declared that the policy of India would be based upon Gandhi's ideal of the progressive realization of a non-violent society, in which caste and class, exploitation and war would cease.

Indo-Pakistan Relations. The chief bone of contention between the two countries was Kashmir, and much disappointment was felt when Sir Owen Dixon, the mediator appointed by the Security council, failed to break the deadlock. Nehru maintained his attitude that Pakistan was the aggressor and that a plebiscite could only be held under the auspices of Sheikh Abdullah's government (*see* KASHMIR). Another cause of friction was the economic situation arising out of India's decision to devalue the rupee. This had a disastrous effect on trade, especially in Bengal, where the jute grown in Pakistan territory was processed in Calcutta for export. India's action in suspending coal supplies in retaliation for Pakistan's failure to deliver raw jute seemed at one time likely to end in an economic war, and the flame was fanned on either side by the more irresponsible sections of the press, which clamoured for reprisals. As a result, communal rioting was resumed, especially in the mill areas of Calcutta, which had been hard hit, and the casualties were much exaggerated by rumour. This in its turn led to a resumption of migration, and as many as 20,000 fugitives a day began to flee across the border in either direction. Fortunately the responsible leaders of both countries were aware of the perils of the situation and at a meeting of the two prime ministers at Delhi an agreement was drawn up, guaranteeing to minorities " the complete equality of citizenship irrespective of religion; a full sense of security in respect of life, culture, property and personal honour; freedom of movement within each country; and freedom of occupation, speech and worship, subject to law and morality."

The Delhi agreement was presented to the Indian parliament on April 10 and was accepted by all except the small body who still dreamed of an undivided India. Two Bengali ministers, Dr. Mookerji and K. C. Neogy, resigned. Immediate steps were taken to implement the decision. Minority commissions were set up and an enquiry into the whole situation was opened at Calcutta. On May 17 A. M. Malik, Pakistan minister for minority affairs, arrived to hold conversations with C. C. Biswas, his opposite number in India. The two arranged to undertake a joint tour of the affected areas in Bengal and Assam, and this had a marked effect. Confidence was restored, and migrations declined from 20,000 to 5,000 a day. Some 10 million Hindus remained in East Bengal and about 11 million Moslems in West Bengal. During the latter part of 1950 about 11,000 Moslem refugees from Madhya Pradesh (formerly United Provinces) also returned to their homes, though this was only a small proportion of the original 300,000 who had sought refuge in Pakistan during the disturbances.

In the meantime, on April 25, a six months' trade agreement had been signed at Karachi. The Pakistan Jute board consented to furnish Indian mills with 300 million lb. of raw jute, and the government of India undertook in return to arrange for the supply of 20,000 tons of jute manufactures to Pakistan. In addition, Pakistan agreed to take through normal channels goods such as textiles, woollen and cotton, mustard oil, tobacco, steel sheets, timber and cement, as nearly as possible of an equal value to the jute purchases by India. Trade in certain other commodities was to be allowed free of import and exchange restrictions, and Pakistan was to furnish India with 150,000 tons of wheat at an agreed price; but no reference was made to coal, or the disagreement over the exchange ratio of the rupee, the real root of the trouble. A frank discussion between the two prime ministers took place over other outstanding differences, such as canal water and evacuee property. Nehru said that it was not expected that the pact would solve all the points at issue by a stroke of the pen. Its value lay in the fact that it created a friendly atmosphere. He also proposed a " no war " agreement with Pakistan, by which all differences between the two



Rajendra Prasad (centre) delivering his first address after being sworn in as the first president of the republic of India, New Delhi, Jan. 26, 1950.

countries should be settled by discussion or referred to arbitration.

Foreign Relations. In pursuit of his policy of a united Asia, Nehru paid visits to the Indonesian and Burmese republics and to Malaya, where he was cordially received. The outbreak of war in Korea was regarded with mixed feelings in India, where "imperialism," as exemplified by the American bombardment of North Korean towns, was more unpopular than communism. Nehru, while not offering his services either for war or mediation, put forward a suggestion for limiting the area of the conflict and eventually ending it. This lay in breaking the deadlock in the Security council by the admission of the representative of the people's republic of China (the Communist regime) and so paving the way to the return of the Soviet Union to the council. The proposal was not favoured by the British or U.S. governments. After these endeavours, the news of the invasion of Tibet by the Chinese in October was received with surprise and regret, as Nehru had always regarded a firm understanding with China as the keystone of Asiatic nationalism and the only barrier to international chaos. A strong note was addressed to Peking, to which the Chinese government replied asserting its suzerainty over Tibet, and claiming that this was a purely domestic issue. In its answer, India pointed out that there was no point of difference between the two countries which could not be settled peacefully: China's action had brought world war nearer. The Indian government repudiated the insinuation that its action had been prompted by foreign powers hostile to China.

Nepal. In view of events in Tibet and Russian activities in the neighbouring province of Sinkiang, where railways and aerodromes were being constructed and mineral resources exploited with the connivance of the Chinese, the importance of the border states of Sikkim and Bhutan and of the independent kingdom of Nepal (*qq.v.*) was greatly enhanced, and India had concluded with them treaties of mutual assistance. The Indian government gave asylum to King Tribhuvana after the palace revolution in November when he was replaced by his three-year-old grandson. While professing studiously to respect the right of Nepal to settle its internal affairs, the government strongly advised the rulers to liberalize the institutions of the country.

Domestic Affairs. Nehru's statesmanlike policy, though approved by the great body of moderate opinion, was unpopular with extremists on both sides. To the right lay Sardar Patel and the supporters of Hindu orthodoxy and big business, who were opposed to any concessions to Pakistan. To the left were the Socialists under Jai Prakash Narayan, who were critical of the government's alleged failure to alleviate the lot of the masses. Still farther to the left were the Communists, whose subversive activities in Hyderabad, Assam and other localities had caused considerable anxiety and had more than once required the use of armed force. Apprehensions were therefore aroused about the outcome of the 56th session of the Indian National Congress, held at Nasik on Sept. 21 under the chairmanship of Purushottamdas Tandon, one of Nehru's most outspoken critics. These were dissipated when, after some lively debate, the government's foreign and domestic policy was endorsed by a substantial majority. It was learned subsequently that Nehru, C. Rajagopalachari and Maulana Azad had joined the working committee. This established Congress in its old position as the leading political party in the country.

At the end of August, severe earthquakes devastated parts of Assam, causing much damage and loss of life. Among donations to relieve the sufferers were 10,000 maunds of rice from Pakistan. Widespread floods in Bihar and a poor monsoon in other provinces contributed to make the food situation difficult. (For the Plan for Co-operative Economic Development in South and Southeast Asia, *see* CEYLON. In India, the programme included the Damodar Valley scheme in Bihar, the Hirakud dam on the Mahanadi river and the Sutlej dams.)

On Dec. 15 occurred the death of Sardar Patel, deputy prime minister and veteran leader of the Congress party (*see* OBITUARIES.) (H. G. RN.)

Agriculture. Main crops ('000 metric tons, 1949; 1950 est. in brackets): wheat 5,685 (5,633); barley 2,302; maize 1,959; rice 34,519; tea 252 (265); cotton, ginned 520; potatoes (1948) 1,850; sugar, raw value 3,250; groundnuts 3,454; rapeseed 783; cottonseed 1,040; linseed 432; sesame seed 300; jute 500 (726); wool 26; coffee 22·7 (16·6); tobacco 363. Livestock ('000 head): cattle (Jan. 1950) 181,500; sheep (Jan. 1950) 39,000; pigs (1945) 3,709; horses (1945) 1,398; mules (1945) 45; buffaloes (1945) 40,732; camels (1945) 656; asses (1945) 1,131; poultry (1945) 58,248. Fisheries: total catch (1949) 513,764 metric tons.

Industry. Industrial establishments (1945): 103,400; persons employed 1,843,797. Number of trade disputes (1949) 914; numbers of workers involved 684,188; number of days lost 6,560,887. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 31,968 (16,543); electricity (million kwh.) 4,920 (2,475); crude oil ('000 metric tons) 250 (125). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): pig iron 1,548 (766); steel ingots and castings 1,380 (698); copper 6·5 (3·2); aluminium 3·5 (1·7); asbestos 88·2 (43·3); rubber 15·8 (7·2); superphosphates 47·4 (19·8); gold ('000 fine ounces) 161 (87). Manufactured goods (1949; 1950, six months, in brackets): cement ('000 metric tons) 2,136 (1,261); cotton yarn (million metres) 616·8 (273·9); woven cotton fabric (million metres) 3,576 (1,743); paper and paper boards ('000 metric tons) 104·8 (53·7).

Foreign Trade. (Million rupees, 1949; 1950, six months, in brackets) import 5,915 (2,431); export 4,994 (2,405). Main sources of imports (1949): U.K. 29%; U.S. 20%; Egypt 6%. Main destinations of exports: U.K. 24%; U.S. 17%; Australia 5%. Main imports (1949): grain, pulses and flour 19·7%; machinery and millwork 11·5%; raw jute 10·7%; raw cotton 9·7%. Main exports: jute manufactures 33·3%; tea 14·7%; cotton manufactures 9·7%.

Transport and Communications. Roads (1948): 190,500 mi. Licensed motor vehicles (Dec. 1949): cars 120,444; commercial 103,537. Railways (1949): 34,141 mi.; passenger-mi. 38,012 million; freight net ton-mi. 24,993 million; freight carried ('000 metric tons) 118,489. Shipping (July 1949): number of merchant vessels over 100 gross tons 168; total tonnage 395,427. Air transport (1949): capacity ton-mi. flown 36·6 million; passenger-mi. 195 million; cargo net ton-mi. 6·5 million; air mail carried ('000 metric tons) 1,800. Telephones (1949): 113,466. Wireless licences (1949): 299,000.

Finance and Banking. (Million rupees) budget: (1949-50) revenue 3,323·6, expenditure 3,361·0; (1950-51 est.) revenue 3,391·0, expenditure 3,378·8. National debt (1949-50; 1950-51 in brackets): 17,534·3 (16,092·6). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 11,890 (12,090). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 1,805 (1,942). Bank deposits (Sept. 1949; Sept. 1950 in brackets): 7,080 (6,770). Monetary unit: *rupee* with an exchange rate of Rs. 13·33 to the pound and Rs. 4·775 to the U.S. dollar.

INDIA, FRENCH: *see* FRENCH INDIA.

INDIA, PORTUGUESE: *see* PORTUGUESE COLONIAL EMPIRE.

INDO-CHINA. Until 1946 this name covered four French protectorates and the colony of Cochin-China, bounded N. by China, W. by Burma and Thailand and S. and E. by the South China sea. From 1949 Indo-China had no legal existence, being replaced by the three associated states of the French Union. Areas and populations are :

	Area (sq.mi.)	Population (1936 census)	Population (1948 est.)
Vietnam	126,608	18,972,000	22,663,000
Tongking (Bac-Ky)	44,660	8,700,000	9,851,000*
Annam (Trung-Ky)	56,974	5,656,000	7,184,000*
Cochin-China (Nam-Ky)	24,974	4,616,000	5,628,000
Cambodia	69,866	3,046,000	3,748,000
Laos	89,320	1,012,000	1,169,000†
Total	285,794	23,030,000	27,580,000

* 1943 estimates. † 1947 estimates.

Three-quarters of the population live on the coastal plain, on one-tenth of the total area; the deltas of the Red river (Tonking) and of the Mekong (Cochin-China) are among the most thickly populated regions of the world. Annamites form the great majority of the population of Vietnam: they speak Annamese and Confucianism is their dominant religion: they



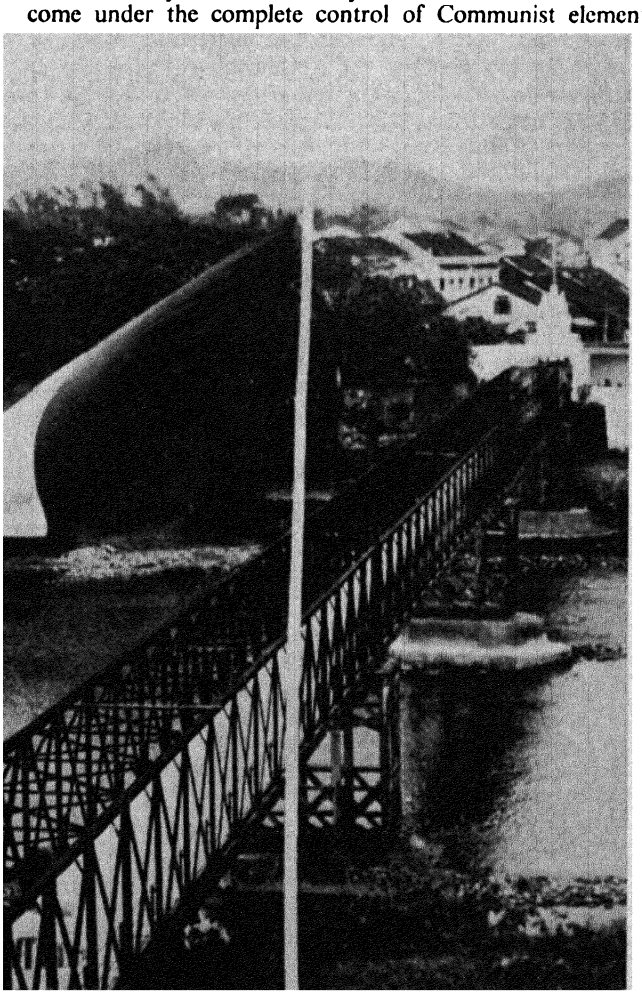
owe the foundation of their civilization to China. Cambodians (or Khmers) are Buddhist and Hindu influence shaped their cultural life. The Mois of the southern highlands of Annam and Laos are Indonesians, akin to Dayaks of Borneo: they are pagan and of a backward civilization. In the northern highlands of Laos and Tongking there are tribes of Chinese origin. In the areas of Luang Prabang of Laos and of Battambang of Cambodia the inhabitants are Thais (or Siamese). In 1936 the population of Indo-China included 326,000 Chinese and 42,000 Europeans; in 1946 there were only 26,000 Europeans, including 23,000 French or *assimilés*. Chief towns (pop., 1949 est.): Saigon, capital of Vietnam, with the seaport of Cholon (1,700,000); Hanoi (166,000); Haiphong (92,000); Pnom-Penh, capital of Cambodia (128,950); Vientiane or Vien-chan, capital of Laos (13,700). Rulers and commissioners: Vietnam; ruler, Bao Dai; high commissioner and commander in chief, General Jean de Lattre de Tassigny. Cambodia: ruler, King Norodom Sihanouk; commissioner, Jean de Raymond. Laos: ruler, King Sisavang Vong; commissioner, Miguel de Pereira.

History. After lively debates, the French National Assembly by 401 votes to 193 on Jan. 27 passed a bill ratifying the agreements establishing the independence of Vietnam, Cambodia and Laos within the French Union. An interstate conference presided over by Albert Sarraut, a former prime minister, opened at Pau on June 29 and on Nov. 27 with some

difficulty reached an understanding regarding the transfer of responsibilities from the French to the national authorities. On his return to Saigon, Tran Van Huu, premier of Vietnam, expressed himself as dissatisfied with France, which he accused of seeking to set up Laos and Cambodia against Vietnam and to keep control of the country by means of French officials. Nevertheless, on Dec. 21, he was obliged to acknowledge that all important administrative and financial institutions were to have Vietnamese directors from Jan. 1, 1951, but that it would still be necessary to retain French directors in certain technical services.

The government of Bao Dai gained nothing in prestige or popularity, and he was forced, therefore, to try to outbid the Nationalists without succeeding in averting suspicion either from himself or from France. The seriousness of the military situation caused him on Oct. 17 to bring to an end his stay in Cannes where he had been for four months. After renouncing personal control of the state, on Jan. 21 he nominated N'Guyen Phan Long as prime minister and on April 27 called on Tran Van Huu, former governor of south Vietnam, to assume direction of the government. Recognition by the U.S.S.R. of Ho Chi Minh's (*q.v.*) People's Republic of Vietminh led to similar action by Great Britain and the U.S. with regard to the Boa Dai government on Feb. 7. A violent demonstration by Saigon students and workers on March 19 against American aid disclosed a remarkably well-organized technique of disturbance. On May 8 Dean Acheson, U.S. secretary of state, confirmed that the United States would provide economic assistance for the associated states.

The military situation steadily deteriorated. Vietminh had come under the complete control of Communist elements relying on Chinese help. The French defence line, 320 km. long, protecting the Sino-Vietnamese frontier between Mon-cay and Cao-bang, had to be abandoned in deplorable circumstances. Of 4,800 troops and civilians who left the post of That-khé and Cao-bang more than 2,000 men were lost to the enemy on Oct. 7 and 8. Hasty and conflicting orders were revealed at the evacuation of Lang-son. General Marcel Carpentier, commander in chief, was criticized, and the morale of the troops was affected. After an inspection by Jean Letourneau, head of the new Ministry for Associated States (established on May 23), and General Alphonse Juin, joint civil and military powers were vested in General Jean de Lattre de Tassigny on Dec. 6. On his arrival in Hanoi, the general declared that the days of wavering were over and the hour of order had arrived. Hanoi and Saigon thence forward became fragile bridgeheads in southeast Asia, where a third of the French active forces were tied down. Pending the arrival of American equipment, it was the task of the French to hold the Tongking citadel whence there had already been partial civilian evacuation.



The French flag at the frontier post of Mon-cay, Indo-China. Across the river is China.

After dissolving the National Assembly on Sept. 18, 1949, King Norodom Sihanouk of Cambodia supported Yem Sambaur as head of the government, with augmented powers, in defiance of the constitution which forbade the assumption in such circumstances of the functions of premier by the president of the Assembly. Such was the hostility encountered by the government that the king was compelled on April 28 to take the reins himself and on May 30 to form a government of national unity, presided over by Prince Monipong. The draft of an electoral law for the appointment to a new Assembly was ill-received by the great majority of opinion. The central authority did not succeed in restoring security.

On Feb. 6 conventions were signed at Vientiane to put into effect the treaty of Paris (July 19, 1949) by which France recognized Laos as an independent associated state. The premier, Prince Boun Oum, resigned on Feb. 15 and was replaced by Phouy Samanikone. From April 14, the Laos New Year, the royal government took over effective control of all state administration. To contend with incursions by Issarak and Vietminh forces on the Bolovens plateau, the minister of the interior took in hand the formation of a counter-guerrilla commando force.

Agriculture. Rice production (1949-50, '000 metric tons): Cochin-China or south Vietnam, 1,550·8 (56% of prewar production); Cambodia, 1,220·4 (800 in 1948-49); maize (1949, Cambodia) 35 (95 in 1948). Livestock (1949, '000 head): 1,486 including 936 in Cambodia; buffaloes 1,264; pigs 1,900; horses 26·3 including 15 in Tongking or north Vietnam.

Industry. Main products (1949, '000 metric tons): coal 371·1; cement (north Vietnam) 152·9; rubber 43·7; alcohol (south Vietnam and Cambodia) 131,977 hl.; timber 248,000 cu. m. Tin concentrates at 50% (Laos, 1950 est.) 550 metric tons.

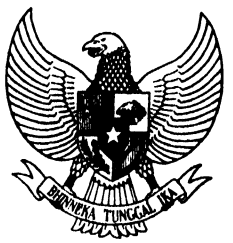
Foreign Trade. (Million metropolitan francs, 1949) import 66,822·6; export 19,303·4. Main exports: rice 5,181·7; rubber 6,096·7; spices 999·8; coal 627·5; maize 587·5.

Transport and Communications. Railways (1948): 3,245 km. Roads (1948): 20,370 km. Motor vehicles licensed (1948): cars 15,500, commercial 7,500. Ships entered at Saigon-Cholon (1949) 649; passengers: arrivals 81,016; departures 75,038; cargo ('000 metric tons) unloaded 151, loaded 103·2. Air transport (1949): aircraft landed 937; passengers: international traffic, arrivals 9,289; departures 12,650; internal traffic, arrivals 63,606, departures 74,954.

Finance. Budget (1949 actual) balanced at Piastres 1,569,814,400. Monetary unit: *piastre* = MFr. 17. (C. A. J.)

INDONESIA. The independence of Indonesia was proclaimed at Jakarta (Batavia) on Aug. 17, 1945, but the republic of the United States of Indonesia came into being on Dec. 27, 1949, when Queen Juliana of the Netherlands signed the charter transferring to the Indonesian people the sovereignty of the territories of the Netherlands East Indies —with the exception of Irian or Dutch New Guinea (*see* NETHERLANDS OVERSEAS TERRITORIES). The provisional

constitution of 1949 stipulated that the republic was to be a federation of seven states and nine autonomous territories. On Aug. 14, 1950, the parliament of the republic decided that the principle of federalism should be abandoned and that Indonesia should be a unitary nation-state divided into 10 provinces. Total area (excluding Dutch New Guinea): about 583,000 sq.mi. Total pop.: (1939 est.) 69,435,000; mid-1949 est.) 79,260,000, all but 2·6% being indigenous; two-thirds of the total population lives on Java. Language: Malay is to a certain extent a language of inter-communication between different population groups speaking 25 main languages and 250 dialects. Religion (1941 est.): Moslem about 90%, Christian 3·4%, Hindu 1·4%. Chief towns (pop., 1930 census): Jakarta (*q.v.*, cap., 435,184; [mid-1949 est.] 1,200,000); Surabaya (341,675); Semarang (217,796); Bandung (166,815); Surakarta or Solo (165,484); Jokjakarta (139,649). President of the republic, Ahmed Sukarno; prime ministers in 1950, Mohammed Hatta (*q.v.*) and (from Sept. 5) Mohammed Natsir (*q.v.*); Netherlands high commissioners in 1950, H. M. Hirschfeld and (from Aug. 3) A. T. Lamping.



The national insignia of Indonesia.

History. The first year of Indonesia's independence was a period of grave difficulties and upheavals. The government faced a threefold task. Internally, as heirs and successors to a century and a half of Dutch rule, it still had to gain the loyalty and compel the obedience of the various Indonesian peoples and tribes scattered over the archipelago. In its relations with the Netherlands, Indonesia had to carry out the agreements concluded at the 1949 Round Table conference and to contribute its share to the implementation of the Netherlands-Indonesia union. Externally, Indonesia had to secure a position among the nations of the world, and those of south and east Asia in particular, in a period marked by increasing political tension.

The End of Federalism. The foundations on which the political structure of the republic of the United States of Indonesia had been built proved to be too weak to support it for long. The federal principle of government, a compromise reached between the original republic of Indonesia proclaimed in 1945 on the one hand and the regional states (*negaras*) established since then on the other hand, had been laid down in the constitution, with elaborate safeguards, and ratified by all states. Nevertheless the intransigent nationalist spirit embodied in the old republic, which covered parts of Java and Sumatra, continued to clash with the federal conception of the state. Republican adherents in the territory of different states—not the least the armed irregulars, taken over by the central government as the nucleus of a national army—soon brought about a situation which made it impossible for the separate state governments to carry out their functions. The central (federal) government, observing the way things were going, adopted a passive attitude, and the state governments, unarmed and abandoned, resigned their constitutional powers to the central government one after another (East Java, Madura and Pasundan or West Java in January; South Sumatra and East Borneo in March; the rest of Borneo and East Indonesia in April).

The next phase was characterized by public demonstrations demanding the annexation of the states' territories by the republic of Indonesia. Again the central government, remaining passive, took steps to legalize the apparently inevitable trend, and on March 8 emergency legislation was enacted on the strength of which those territories as well as the federal district surrounding the capital Jakarta were incorporated in the republic of Indonesia.

The annexation of state territories did not proceed without hitch everywhere. In West Java armed malcontents, supported by a small number of soldiers from the former Netherlands-Indies army led by an ex-captain (" Turko " Westerling), even succeeded in capturing the capital Bandung on Jan. 23 from the republicans. The Netherlands high commissioner, however, and the Indonesian premier issued a joint statement threatening " co-ordinated action " (that is the using of the Dutch troops awaiting repatriation) against the insurgents, whereupon the movement petered out. The Westerling incident and dark suspicions on the Indonesian side of a reactionary plot behind it remained a stumbling block in Netherlands-Indonesian relations for months afterwards.

In East Indonesia some prominent Ambonnese people, watching the imminent downfall of the East Indonesian state of which their country formed part, on April 25 seceded and proclaimed a South Moluccan independent republic. The central government waged a protracted blockade followed by active naval and land warfare against the islands of the South Moluccas groups, until it was claimed in November that the capital city Ambon had been taken and major resistance had ceased.

Meanwhile the central government and the government of the republic of Indonesia, enlarged by the above-mentioned annexations, had conferred on the means of legalizing the situation. On May 19 the conference resolved to have a new interim constitution enacted, which would be based on unitary instead of federal principles of government; limited provincial autonomy would be substituted for state rights and the Senate consisting of equal numbers of members from each state abolished. This new constitution merging the republic of the United States of Indonesia with the republic of Indonesia was duly approved by the representative bodies and promulgated on Aug. 15. The last of the states, East Sumatra, now ceased to exist; the name of the *Republik Indonesia Serikat* (United States of Indonesia) was officially changed into *Republik Indonesia*. President Sukarno retained his office, but the Hatta cabinet resigned and was succeeded by the Natsir cabinet.

Internal Difficulties. While the political events summarized above demanded most of the central government's attention, internal conditions in nearly every region of Indonesia, whether directly affected by those events or not, deteriorated considerably. The chain of authority and command, uniting the whole of the administration and the various public services, began to weaken and broke apart in several sectors. In some areas (notably Achin or Atjeh in north Sumatra) the authority of the central government was not recognized or was ignored; in west and central Java a fanatical Moslem group (Dar'ul Islam) terrorized the rural population and defied the government. The armed forces, consisting for the major part of former irregular adherents of the original republic of Indonesia which still had to be welded into a regular national army, paid scant attention to government orders. In the absence of a regular system of pay and supply many armed units lived off the land.

The ranks of the civil service corps were depleted, as numbers of experienced Indonesians were expelled for charges of collaboration with the Dutch in former days, and many Dutch experts who had agreed to serve the new government under the Round Table conference arrangements found existing conditions untenable; on the other hand the ranks were swollen beyond normal proportions by the influx of Indonesian youths who founded their claims to employment on patriotic zeal during the revolutionary period rather than on administrative experience or ability.

A big budgetary deficit threatened the country. " Rationalization " of the armed formations by reduction of their numbers, first priority among economy measures, had the

result that many discharged soldiers formed bands of robbers. Law and order, security of life and property, disappeared in several areas. Successive waves of strikes in various sectors of private enterprise curtailed production for home consumption and for export, thus affecting the balance of trade unfavourably. The Communist party infiltrated, and soon dominated, the trade union movement; politically their tactics followed the usual pattern of exploiting every available difficulty which Indonesia had to face, at home or abroad, to foster opposition to the responsible government and to discredit its attempts to meet its problems in a realistic spirit.

In October the Natsir cabinet met the parliament for the first time and after prolonged debates on general policy won a vote of confidence with a substantial majority. Fortified by this success it resolved to tackle the problem of internal insecurity. After a nation-wide drive to collect all arms possessed illegally by civilians, a widespread campaign of army and police forces to stamp out terrorism and banditry was scheduled to begin on Dec. 4.

Foreign Relations. Indonesian relations with the Netherlands and the Netherlands-Indonesia union which was designed to systematize their voluntary close co-operation as sovereign states, went through more than one severe crisis. The " Westerling " affair in the eyes of the Indonesians and the liquidation of the federal states which was looked upon as a violation of the right of self-determination by the Dutch caused considerable tension between the union partners. Nevertheless the two governments agreed not to let these differences stand in the way of the regular half-yearly conferences of ministers, as called for by the union statute. The first of these conferences opened in Jakarta on March 25, the second in November at The Hague. Both successfully handled several legal, financial and economic subjects and ended in mutually acceptable agreements.

At the first union conference it was decided to establish a joint committee to study the problem of the future status of New Guinea, which was held over at the Round Table conference. The committee's report showed diametrically opposed Dutch and Indonesian standpoints; violent agitation for the annexation of New Guinea started, sparked by a series of fiery speeches by President Sukarno. This campaign brought the country into open conflict with Australia, whose government declared itself firmly opposed to any Indonesian territorial ambitions in New Guinea. (*See* also NETHERLANDS OVERSEAS TERRITORIES; PAPUA-NEW GUINEA.)

In its external policy the Indonesian government followed on the whole, though not dependably, the guidance of India and adopted an attitude of neutrality in regard to the disputes dividing the Atlantic and the Soviet blocs. After prolonged hesitation, influenced in the main by China, ever looming large on the Indonesian political horizon, Indonesia finally joined the United Nations in September, where its delegation entered the assembly among unanimous manifestations of good will towards the youngest member. (W. G. P.)

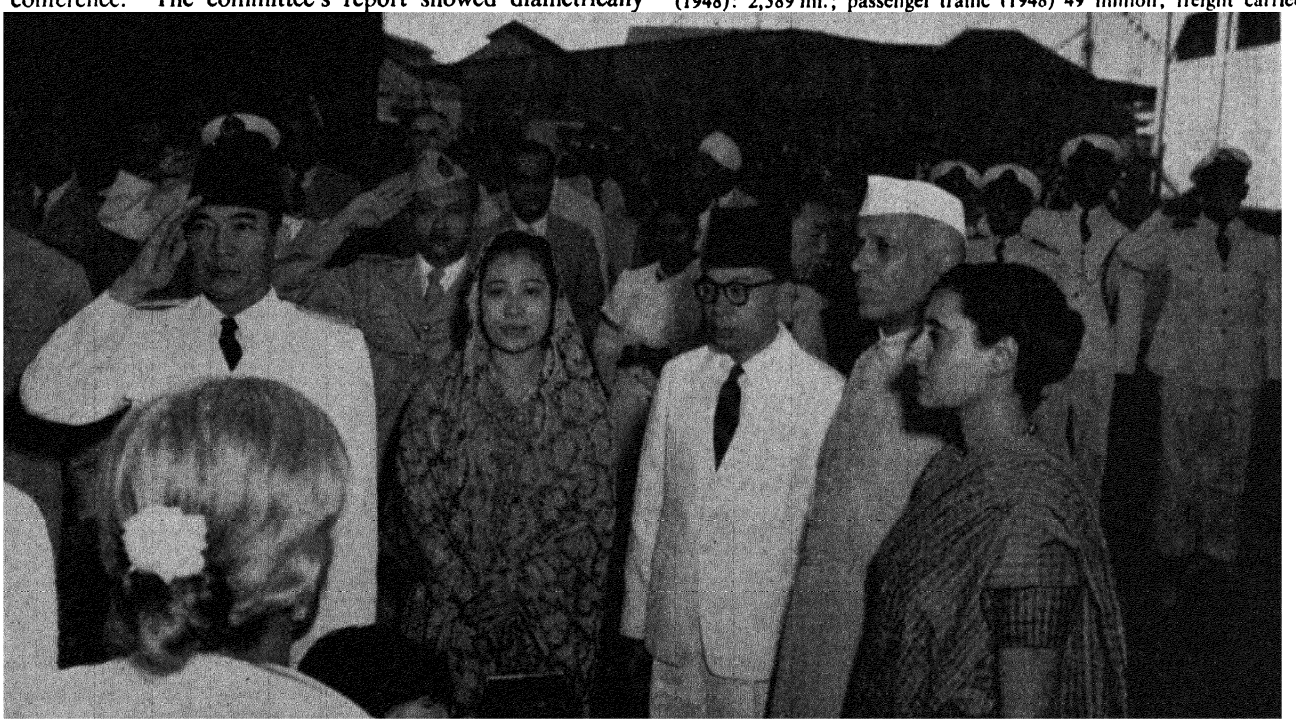
Education. Schools (1949-50): primary 24,542, pupils 4,212,031, teachers 74,751; secondary 1,250, pupils 165,399, teachers 7,500; teachers' colleges 397, students 21,023. Universities: faculties 14, students 3,238. Chinese schools 681, pupils 162,315, teachers 3,421.

Agriculture. Main crops (Java and Madura only; '000 metric tons, 1948; 1949 in brackets): rice, paddy 5,402 (5,796); maize 1,600 (1,700); cassava 6,067 (4,692); sweet potatoes 1,140; soya beans 256 (227); groundnuts 270; tea 13 (25); tobacco 28; palm oil 56 (118). Livestock ('000 head): sheep (1948) 1,820; cattle (1949) 3,598; pigs (1948) 1,171; horses (1948) 620; buffaloes (1948) 1,246; goats (1948) 6,910. Fisheries: total catch (1947) 28,000 metric tons. Total production of fats and oils ('000 metric tons, 1948; 1949 in brackets): 650 (840).

Industry. Fuel and power ('000 metric tons, 1949; 1950, six months, in brackets): coal 662 (392); crude oil 5,930 (3,500). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): tin 29·4 (16·0); natural rubber 438 (298·7); bauxite 678; salt 13.

Foreign Trade. (Million guilders, 1949; 1950, six months, in brackets) import 1,574 (1,184); export 1,478 (1,549). Main sources of imports (1949): U.S. 25%; Netherlands 21%; U.K. 10%; Japan 7%. Main destinations of exports: Malaya and Singapore 24%; Netherlands 23%; U.S. 16%; U.K. 4%. Main imports: textiles 25·5%; foodstuffs, beverages and tobacco 20·5%; vehicles and machinery 17·6%; metals 10·6%. Main exports: petroleum 28·3%; rubber 23·9%; tin and tin ore 11·7%; copra 10·8%.

Transport and Communications. Roads (1940): 43,700 mi. Licensed motor vehicles (Dec. 1949): cars 17,200; commercial 28,000. Railways (1948): 2,389 mi.; passenger traffic (1948) 49 million; freight carried



President Sukarno receiving Jawaharlal Nehru of India when the latter arrived at Jakarta, June 7, 1950. Left to right, President Sukarno, Mrs. Sukarno, Mohammed Hatta, prime minister of Indonesia, Nehru, and his daughter, Mrs. Indira Gandhi.

('000 metric tons, 1949) 4,992. Shipping regularly serving Indonesia (1947): merchant vessels 154, gross tonnage 757,000. Garuda Indonesian airways (1949): passenger-mi. flown 7,788; freight ton-mi. 4,296. Telephones (1940): subscribers 51,606. Wireless receiving sets (1949) 100,000.

Finance and Banking. (Million guilders) budget: (1949-50 actual) revenue 2,602·2, expenditure 3,907·1; (1950-51 est.) revenue 1,871·1, expenditure 2,596·1. National debt (July 1950): 18,394. Currency circulation (Sept. 1949; Sept. 1950 in brackets): 1,786 (2,400). Gold reserves (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 178 (178). Bank deposits (Sept. 1949; Sept. 1950 in brackets): 761 (813). Monetary unit: *guilder* or *florin* with an exchange rate of Fl. 10·64 to the pound and Fl. 3·80 to the U.S. dollar.

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INDUSTRIAL HEALTH. In 1950 the Factory department of the Ministry of Labour and National Service issued a report on *Industrial Lung Diseases of Iron and Steel Workers* (H.M.S.O., London) by A. G. McLaughlin, who, with the assistance of several specialists in industrial medicine and hygiene, had in the course of the past years studied about 3,000 workers in 19 foundries in Great Britain. Though brief reports had previously been published on the effect of the processes and materials used in foundries upon the lungs of foundry workers, this was the first comprehensive report. The main foundry occupations are sandblasting, the cleaning of castings by fettling, chipping and knocking out, grinding, moulding and furnace bricklaying; and the report included the results of clinical and radiographic examinations, an analysis of records already available and a study of the pathology of the lungs of 64 deceased foundry workers and of details relating to dust-surveys, with descriptions of foundry processes and methods of investigation. In describing the X-ray appearances a four-fold classification was used; viz., normal, early reticulation, reticulation and nodulation (including massive shadows). It was shown that there was a greater risk of the occurrence of severe abnormalities in steel-foundry workers than in workers in iron or mixed iron-and-steel foundries; that fettlers were more liable than workers in any other foundry occupation; and that in moulders as well as in fettlers X-ray abnormalities were particularly likely to occur. The report discussed in some detail the symptoms and physical signs and the pathology of the conditions encountered. It also gave considerable details of the environmental studies made and of risks applicable to the various occupational groups, including welders.

The Medical Research council published a comprehensive report on its investigations into the problem of industrial fluorosis in Great Britain. The investigation comprised the study of the hazard to man and animals in an area near Fort William in Inverness-shire. It is well known that fluorides may cause changes in the enamel of the teeth of both humans and animals and that cryolite dust, if inhaled in sufficient quantity or indeed ingested, can over a number of years produce changes in bone, tendons and joints, in particular those which occur in the vertebral column and give rise to the cryolite worker's "poker back." The report dealt with the manufacture of aluminium and the environmental studies within and without the factory and gave details of the effect of fluorine compounds on animals in the area together with clinical, dental and other investigations on selected individuals, both adults and school-children, in the vicinity of the factory. Although the older type of furnace-room worker inhaled a considerable quantity of fluoride, his urinary excretion of it roughly counterbalanced his intake. Some of the older workpeople showed bone-changes now generally recognized as indicative of fluorosis, but none suffered any clinical disability (these early changes must be recognized as a warning of the danger of developing fluorosis). The residents in the neighbourhood showed no sign of injury to health.

The year 1950 saw two important meetings on industrial diseases: the third international congress of experts on pneumoconiosis in Sydney, whose proceedings were to be published by the International Labour office; and an international meeting on the Clinica del Lavoro in Milan, at which two British films on industrial dermatitis were shown.

The significance of the biological hazards associated with developments in atomic energy being of the greatest importance, the Institute of Biology and the Atomic Scientists' association, with the support of the British Association, held a two-day conference in October in the Royal Institution. On the first day the biological and medical effects of nuclear radiations and tolerance-levels and measures of protection were considered by a number of specialists in their particular fields. The second day was devoted to the biological implications of atomic energy and to the problems of the future.

(A. J. AR.)

United States. During 1950 a state of national emergency in the U.S. drew attention to the manpower resources of the country and the ability of the health professions to contribute to achieving the highest industrial production. The numbers of professional persons engaged in industrial health services at the close of the year assured reasonable protection, and the facilities for recruitment and training were regarded as much improved. Industry, as a prime target in the event of hostile attack, revived discussions and plans for defence measures as regards plant security in the immediate sense and integration with over-all community organization. Much thought was given to total mobilization and assignments to services either in the armed forces or supporting industrial work according to special skills or physical and emotional fitness.

The division of industrial hygiene of the Public Health service embarked on a clinical and environmental study of uranium mining and milling. Air pollution continued to receive a large share of the division's attention, particularly through an international joint commission operating in Windsor, Ontario, and Detroit, Michigan. A field study instituted in ten eastern states represented the first steps toward uniform collection of occupational disease reports on a national scale. Field headquarters and laboratories were established in Cincinnati, Ohio, to supplement similar services located in Salt Lake City, Utah.

The Federal Security agency conducted a conference on ageing which considered medical and health aspects of the older population, particularly suitable employment and preparation for retirement under medical and personnel supervision. A National Conference on Workmen's Compensation and Rehabilitation was jointly sponsored by the Federal Security agency and the Department of Labour, to promote closer working relations. The President's second Conference on Industrial Safety reaffirmed the principle of joint action between official agencies, voluntary associations, labour and industry as a means for further substantial reduction in work injuries. The President's committee on National Employment of the Physically Handicapped week took action to alert the National Security Resources board to the potential contributions of the disabled in current estimates of available industrial manpower.

The first Conference on Health Problems of Industries Operating in Tropical Countries was held at the Harvard university school of public health. The extensive operations of 22 British, Dutch and U.S. corporations were described as mainly concerned with the control of epidemic disease and improvement of sub-standard nutritional and hygienic conditions found in the native population of the orient, Africa and the East and West Indies.

Although there was no completely acceptable explanation for toxic manifestations associated with exposure to beryllium and certain of its compounds, the favourable results achieved through treatment with ACTH and Cortisone were regarded as substantial progress. There was a definite trend toward a re-examination of pulmonary dust diseases in the light of functional tests and physiological estimates of efficiency. The interest in noise and its control was accelerated by conferences between otologists and industrial hygienists. Further progress could be looked for with the development of improved methods of measuring noise and through the general adoption of audiometric testing as an essential part of the pre-employment examination. (*See* also ACCIDENTS.)

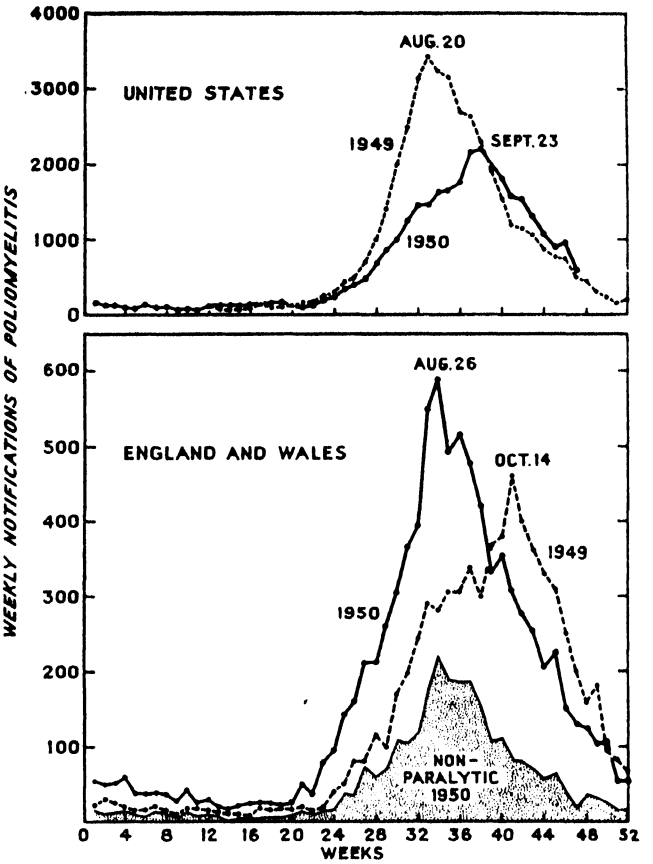
(C. M. PN.)

INFANTILE PARALYSIS. In 1950 the U.S. had less and the United Kingdom more infantile paralysis than the year before, the notification totals for 1950 and 1949 being: U.S., 33,350 and 42,375 (the highest on record): England and Wales, 8,698 (second only to 1947 with 9,195) and 6,857. Not many countries yet published reliable notification figures, but the World Health organization reported high incidences for 1950 in France, where the 1949 epidemic had been the worst for 20 years, parts of Germany, Australia, Belgian Congo, Mexico and Vietnam. In New Zealand, where there had been four major epidemics this century, roughly at 10-yr. intervals, the last extended from Nov. 1947 to July 1949, after which the incidence had been low.

From Jan. 1, 1950, doctors notifying poliomyelitis in England and Wales had to distinguish between the paralytic and non-paralytic cases. Out of the year's total of 8,698 notified cases 5,982, or 69%, had some paralysis; in the remainder the diagnosis was based either on abnormalities in the spinal fluid or on clinical signs alone, such as fever with vomiting and stiff neck, or an indefinite illness in a person known to have been in close contact with an established case. Dr. W. H. Bradley, of the Ministry of Health, estimated that when the notified cases had been fully investigated about half would be found to have had paralytic poliomyelitis and about a third would prove not to have had poliomyelitis at all. Dr. Bradley found that out of every 100 patients admitted to hospital for suspected poliomyelitis during an epidemic, on average 5 or 6 died, 9 or 10 were seriously paralysed, 17 or 18 had milder paralyses which would not prevent their working, and the remaining 65 to 70 either recovered completely or were left with some trivial weakness.

Because non-paralytic poliomyelitis is so often wrongly diagnosed, some authorities, including Dr. James P. Leake, contended that only paralytic cases should be considered when comparing the incidences of the disease in different countries. But the notified cases probably represent only a small proportion of the total people infected with poliomyelitis. A large number of non-paralytic cases either pass unnoticed or are diagnosed as influenza, gastro-enteritis, etc.; and for each person who "catches" the disease there may well be 100 symptomless carriers of the virus who are mainly responsible for spreading the infection. The position has been further complicated by the discovery of the "Coxsackie" viruses, now divided into groups A and B, at least seven distinct types being included in group A. Though these resemble the classic poliomyelitis virus and have been found in patients with paralysis, as well as in cases of "influenza," "pleurodynia" and various vague feverish complaints, they are also common in healthy people, and in 1950 it was not certain whether they were the cause of any human disease.

During 1950 a hitherto unsuspected relation was revealed between preventative inoculations and paralysis. In the Australian state of Victoria Dr. Bertram McCloskey investigated the inoculation history of 340 cases of poliomyelitis and found that 31 of them had been immunized against diphtheria or whooping cough or both within the three months before the onset of poliomyelitis. No less than 30 of these had developed paralysis, and in 23 the most severe paralysis occurred in the limb where the injection had been given. Similar observations were later reported in London, and it seemed certain that prophylactic injections given within four weeks of the onset of poliomyelitis did increase the chances of paralysis developing in the injected limb. It would be a disaster if this occurrence stopped people having their children immunized against diphtheria and whooping-cough; but the authorities both in England and the U.S. recommended the postponement of routine inoculations during poliomyelitis epidemics. (*See* also EAR NOSE AND THROAT, DISEASES OF; EPIDEMICS; NERVOUS SYSTEM). (E. C-JS.)



Infantile paralysis cases notified each week, showing unusually late peak in 1950 in the United States and in 1949 in England and Wales.

INFANT MORTALITY: *see* VITAL STATISTICS.

INNS: *see* HOTELS, RESTAURANTS AND INNS.

INSANITY: *see* MENTAL DISEASES.

INSECTS: *see* ENTOMOLOGY.

INSURANCE. World-wide trading figures of British insurance offices published in 1950 revealed a phenomenal growth in premium income. This expansion, partly due to inflationary pressure, largely reflected the re-alignment of currency values in the latter months of 1949. The handling of this exchange operation was very complicated, and the transaction was variously interpreted in the figures for individual companies. But, despite consequent distortion in the published figures it was evident that much genuine progress had been achieved and that the year 1949 had yielded excellent trading results in all main sections of the business. The aggregate fire and accident premium income for 24

representative British offices in 1949 was £286,075,000, showing an increase of £41,831,000 on the figure for the previous year; and the combined underwriting surplus, at £25,350,000, was higher by £10,037,000 and represented 8·9% of the premiums. Marine premiums rose by £1,274,000 to £34,656,000; and after providing a surplus of £2,945,000 the total marine funds were higher by £10,124,000, at £54,542,000.

New ordinary life sums assured in 1949 again exceeded £500 million, but new industrial life business showed a further recession, the total new sums assured of eight leading industrial life offices being £170,991,000, as against £188,692,000 in the preceding year.

The demand for ordinary life assurance cover was sustained throughout 1950. Business of a short-term nature was written in connection with gifts *inter vivos* and also to provide temporary life cover to meet commercial needs. Assurance for the purpose of meeting estate duty was increasingly made subject to the provisions of the Married Women's Property acts. When the chancellor of the exchequer appointed a committee to review the income tax treatment of superannuation and pension schemes, the reaction was not entirely unfavourable; and much new business resulted in this sphere of life assurance activity. " Family protection " assurance was still very popular.

In fire insurance in the first half of 1950, up to the Korean war, the volume of premium income tended to l .vel off and, in some important territories, slightly to diminish. With the shaping of events in Korea and the subsequent stock-piling to meet defence programmes, premium income regained a certain buoyancy. The remarkable rise in commodity prices involved heavy insurance commitments; and it was difficult to provide the required full insurance cover for wool stocks in Australia and South Africa. Though all requirements were met, the strain imposed on underwriting capacity showed how much the growth of free reserves had in recent years been restricted by increased taxation. With heavy general commitments to be absorbed and the provision of cover as the pressing problem, re-insurance assumed once again its vital role in the international insurance market, with excess-of-loss re-insurance attracting much attention. Widespread rioting and civil strife gave rise to a general demand for protection against losses caused by them, usually including the malicious damage risk.

Insurance values in the United Kingdom again tended to reach higher levels, but the rise in aggregate premiums was not considered commensurate with the increase in money value of individual risk losses. In Canada the partial destruction by fire of the lumber town of Rimouski, Quebec, on the St. Lawrence river, with damage around £8 million, and a similar outbreak in Cabano (75 mi. from Rimouski), which accounted for £5 million, proved a drain on profits. Fire wastage was generally heavy throughout the year; but, taken as a whole, the fire underwriting account of British offices produced a reasonable margin of profit.

Automobile business was again the greatest single influence on the results of the accident departments. Underwriting on a world-wide basis was still difficult; and individual company results were highly variable. Third-party insurance cover was sought; and there was a demand under existent cover for the upward revision of limits of indemnity because of the depreciated value of money and the natural increase in the level of awards and settlements. The underwriting of burglary risks, the cover of cash in transit, plate glass insurance, the granting of fidelity guarantee bonds, personal accident protection and the insurance of boilers and machinery were important parts of the accident account; and results proved generally favourable to underwriters.

The marine insurance market viewed with concern the lower rates quoted for cargo risks and also the effect of devaluation on hull underwriting (especially in the case of vessels repairing in hard currency countries), which could only result in increased claims settlements. Marine funds were maintained at a high level; and the British market, by providing cover for more than £8 million on each of the Cunard " Queen" liners without government assistance, demonstrated its ability to absorb the greatly increased values at risk. Theft and pilferage losses remained a serious problem.

Legislation of a restrictive nature, requiring the local deposit of technical reserves, tended to impede the normal expansion of British insurance in certain fields overseas. (P. Ss.)

North America. During 1950 the legal reserve life insurance companies of the United States and Canada paid about $4,000 million to policy holders or beneficiaries, an amount larger than in any previous year. New life insurance issued by the U.S. and Canadian companies exceeded $30,000 million, constituting another record. At the end of the year, the insurance owned by the 88 million policy holders of the United States and Canada amounted to about $244,000 million. The assets of U.S. and Canadian legal reserve life insurance companies increased by $4,600 million and reached $68,500 million.

United States. In the United States, the life insurance companies' holdings of mortgages increased by $3,200 million during 1950 to reach a total of more than $16,000 million. The companies' portfolios of corporate bonds and notes increased by $1,700 million during 1950. On Dec. 31, 1950, all corporate securities owned by these companies amounted to $25,200 million. Their holdings of U.S. government securities declined in 1950 to $13,650 million. (L. A. L.)

Nearly half the population of the U.S. had some type of hospital insurance at the close of 1950. Membership in non-profit making Blue Cross plans exceeded 40 million at the end of the year. The Health Insurance council reported the Dec. 31, 1949, commercial coverage, after eliminating duplication, as 28 million for hospitalization, 23 million for surgical and 4·5 million for medical. Estimated totals for all types of coverage at the close of 1950 were 73 million for hospitalization, 57 million for surgical and 19 million for medical.

The volume of casualty premiums increased in 1950. This increase was almost entirely in automobile insurance. The profit margin for the companies declined from the results of the two preceding years, and it was believed that some companies might show underwriting losses when all claims were adjusted. With a record output of 8 million new cars and the cumulative effect of automobile financial responsibility laws in many states the volume of automobile insurance business increased substantially in 1950. The frequency of claims under such policies was rising steadily as was their severity. The desirability of rate revision in some jurisdictions was indicated. Premium differentials for drivers under 25 years of age, approved in some states, were expected to improve the experience on this class of insurance.

Workmen's compensation results were adversely affected by three factors: pay rolls, upon which premiums were calculated, were lower during the first six months of 1950; many rate reductions had been made following the profitable experience of preceding years; and the benefits had been increased under workmen's compensation laws. Towards the end of the year greater production in many industries and higher wage scales had begun to increase the volume of premiums for compensation insurance.

In the general liability field (other than automobile), owner's, landlord's and tenant's liability insurance produced an underwriting loss for the companies in 1949 and again in 1950. Higher rates on owner's, landlord's and tenant's policies were being sought by underwriters and substantial

increases were approved by the supervisory authorities for New York. Manufacturer's and contractor's liability and products liability insurance were profitable during 1950, but the trend of profits on these two lines was downward. Operating costs were rising and, with the pressure of defence preparations, an increase in accident frequency was expected. (*See* NATIONAL INSURANCE; SOCIAL SECURITY, U.S.)

(L. E. F.)

INTERIOR DECORATION. For people of average means, the furnishing of a home in Great Britain in 1950 was an expensive undertaking; and for people of discerning tastes, it was one of considerable difficulty. Since few could afford to look beyond the utility ranges, many manufacturers devoted a great part of their production to goods which could be sold on the home market without purchase tax.

Apart from antique reproductions and second-hand stock, furniture shops had little to offer but utility articles, and they were far from cheap. The three-piece suite again made its inevitable appearance as the basic equipment for lounge, dining room and bedroom: mass-produced in great quantity, it consisted of a few superficial variations on a few unsatisfactory shapes; the character of the wood used in the manufacture was generally disguised by glossy coatings of cellulose paint, shaded with an airbrush to give a sham antique effect, the sleek surfaces being enlivened here and there by imitation wood-carvings applied as decorative afterthoughts. The widespread preference for this sort of thing was not easy to explain: there was certainly no aesthetic reason for its popularity, nor could it easily be justified on the grounds of functional suitability. However, among these parodies of elegance, a limited number of well-designed pieces stood out in sharp relief. They were emphatic proofs that first-rate designers ought to be employed to plan the prototypes of mass production. They revealed that designers who were aware of the limitations and possibilities of making by machinery and had a sensitive understanding of the available materials and the requisite processes could create good-looking and efficient articles that suffered little or nothing by comparison with furniture made by hand craftsmen. Finally, they were evidence of a developing realization that mechanical means were not best directed towards the sole end of producing mere facsimiles of hand-made, traditional shapes.

New materials and new methods of treating known materials were evolved during World War II. A few manufacturers and designers with an alert sense of these new possibilities continued to show the results of their enterprise: for instance a chair of pleasing appearance which derived its construction from the technique of making helicopter blades; a satisfactory armchair which consisted of a moulded plastic frame, upholstered with a thick wool pile and supported on metal legs; and other examples which, at the very least, represented an honest attempt to look beyond the present to the future without a nostalgic reliance on the past. Experimental furniture of this kind had not yet reached a point where it could be made economically for quantity production: even if it had, the nature of its reception by a cautious public, who tend to buy furniture only once in a lifetime, was very difficult to estimate.

The expense involved in decorating a house, or even a room, was disconcerting. The only marked difference in the treatment of walls and ceilings was seen in a growing practice of disregarding uniformity of colour. Skilful contrasts between one wall and another were the bases of some very agreeable schemes. The choice of surfaces still lay between paint, distemper or paper. Wallpapers were much in general favour, and there was a vast selection to meet every kind of preference: there were flowers, leaves, fruits, birds and butterflies, realistic or formalized; abstract and geometrical shapes; papers textured or embossed in convincing imitations of brocade, velvet, wood or stone; and signs that all the resources of colour printing had been exploited to the uttermost. Yet the most appropriate settings for modern lightweight furniture in characteristically small modern rooms were to be found in the simplest patterns of fine stripes or dots on flat backgrounds of well-chosen colour.

Furnishing fabrics for curtains and upholstery were in abundance. In profuse displays of new patterns and materials there were many really good and attractive designs, except, for some reason, among the tax-free cloths which constituted a disappointingly mediocre collection. Carpets were remarkable for the quality of their manufacture and their price, but not for any original approach to their design. Smaller rugs, on the other hand, showed a stimulating liveliness of invention in colour, texture and shape. In crockery, there was little to excite the buyer on the home market because decorated ware was still reserved for export.

Throughout all the furnishing trades there were no developments during the year which could be assessed as significant trends. Supply kept more even pace with demand, but the quality of the supply was undistinguished and marred in part by reversions to some of the worst prewar vulgarities. At the same time the Council of Industrial Design was engaged in selecting the best products of many firms for display at the Festival of Britain. There was good reason to hope that the excellent standard of these chosen designs would exert a profound remedial influence on the trade and on the public alike in the forthcoming year's exhibition. (F. W. W.-S.)

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. The operations of the International bank proceeded at an accelerated pace in 1950. The volume of loans, amounting to $276,630,000, was somewhat greater than in the previous year, and brought total loan commitments to $1,020,775,000. The bank's activities in providing technical advice to member countries also increased during the year. Bank lending for the first time extended to countries in Africa, southeast Asia, Australasia and the near east (see Table). Nineteen of the 49 member countries had bank-financed projects either under way or planned. In cases where a private enterprise, rather than a member government, is the borrower, the government guarantees repayment of the loan.

The bank's technical assistance activities continued to expand during the year. Comprehensive survey missions, inaugurated by the mission to Colombia in 1949, were undertaken in Turkey, Guatemala and Cuba. The broad objective of these missions was to examine all important sectors of the country's economy and to make recommendations designed to help the government to formulate a long-range integrated development programme. Technical assistance of a different character was extended to other member nations. For example, the bank joined with the United Nations Food and Agricultural organization in sending a mission to Uruguay to survey Uruguayan agriculture and make recommendations designed to increase production. In El Salvador the bank advised on the sale of a bond issue to finance the local currency costs of a hydroelectric power project, the foreign costs of which were being financed by the bank. In Turkey and Ethiopia, the bank assisted in the formation of development banks.

Early in 1950 the bank retired its outstanding 2¼% bonds due in 1957 by re-funding them with a $100 million issue of 2% serial bonds due 1953 to 1962. In March it sold a second issue of Swiss franc bonds in Switzerland amounting to Fr. 28,500,000 ($6,600,000) of 2½% serial bonds due 1953 to 1956. The bank also sold for, the first time without its guarantee, bonds totalling the equivalent of $1,215,000 from its

INTERNATIONAL BANK LOANS, 1950

	Amount	*Purpose*
Australia	$100,000,000	Purchase abroad of capital goods and equipment for development over a period of two years.
Brazil	$15,000,000	Hydro-electric works.
Colombia	$3,530,000	Hydro-electric plant.
Ethiopia	$5,000,000	Road rehabilitation.
	$2,000,000	Ethiopian development bank.
India	$18,500,000	Equipment for Bokaro power plant and Konar dam, first stage of the Damodar valley scheme.
Iraq	$12,800,000	Flood control on River Tigris.
Mexico	$26,000,000	Electric power projects for Mexico City.
	$10,000,000	Credit to enable eight banks and a government agency to make loans of from $25,000 to $1,000,000 for private enterprise developments.
Thailand	$18,000,000	Irrigation, drainage and water communications.
	$4,400,000	Development of Bangkok port.
	$3,000,000	Railway rehabilitation.
Turkey	$12,500,000	Port development.
	$3,900,000	Construction and mechanization of grain store facilities.
	$9,000,000	Industrial Development Bank of Turkey (privately owned).
Uruguay	$33,000,000	Electric power projects; telephone expansion.

loan portfolio, both in Europe and in the U.S. The obligations so disposed of had been received by the bank in connection with loans to the Netherlands Herstelbank. the French Crédit National and the Luxembourg and Netherlands governments. The international character of the bank's funds available for lending was considerably enhanced during the year. Twenty-three countries agreed to make part or all of their local currency subscription to the bank's capital stock available for use in the bank's lending operations. This brought to 27 the number of countries which had done so.

Net income from the bank's operations for the fiscal year ended June 30, 1950, amounted to $13,698,398 compared with $10,610,247 for the previous fiscal year. A general reserve was established in 1950, to which the bank's net earnings were allocated. This reserve and a statutory special reserve already in existence amounted on Dec. 1, 1950, to approximately $49 million.

With the admission to membership of Pakistan and Ceylon in 1950, the bank had 49 member nations at the end of the year. The annual meeting of the governors of the bank was held at Paris in September when the fifth annual report was presented to the governors. (*See* also INTERNATIONAL MONETARY FUND). (E. R. BK.)

INTERNATIONAL COURT OF JUSTICE.

During the year 1950 the court gave the following advisory opinions and judgments:

Admission of States to United Nations. On March 3 the court advised the general assembly, in response to a request, that the assembly was not competent under article 4, paragraph 2 of the charter to admit a state to membership of the U.N. without a recommendation from the Security council.

South-West Africa. On July 11 the court gave an opinion regarding the mandated territory of South-West Africa. The territory, detached from Germany by the treaty of Versailles, had been placed under mandate with the Union of South Africa, to be administered under supervision of the League of Nations. Following dissolution of the League in 1946, differences arose between the Union and the general assembly concerning the international status of the territory, in view of the trusteeship system established under chapter xii of the U.N. charter.

The assembly asked the advice of the court regarding the international status of the territory, the obligations of the Union arising therefrom, and in particular: (1) whether the Union continued to have obligations under the mandate; (2) whether chapter xii of the charter was applicable; and (3) whether the Union was competent to modify its status, and if not, where such competence was lodged.

The court stated: (1) that South-West Africa continued to be a territory under mandate, that the Union's obligations under the covenant of the League and the mandate continued; (2) that the provisions of chapter xii of the charter were applicable in the sense that they provided a means by which the territory might be brought under the trusteeship system, but that they did not impose upon the Union a legal obligation to place it under the system; and (3) that competence to modify its international status rested with the Union, acting with the consent of the United Nations.

Interpretation of Peace Treaties. Charges were made in the general assembly by certain allied and associated powers, parties to the peace treaties with Bulgaria, Hungary and Rumania, that the three governments had violated provisions of the treaties relating to human rights and fundamental freedoms and had refused to submit the disputes to arbitration. The treaties provided for such disputes commissions composed of three members—one appointed by each party and the third chosen by mutual agreement or, failing this, by the secretary general of the United Nations.

The assembly requested the opinion of the court on four questions: (1) whether the diplomatic exchanges relating to the matter disclosed "disputes" within the meaning of the treaties; (2) whether the three governments were obligated to appoint representatives to the commissions; (3) whether, in the event of an affirmative reply to question 2 and of the failure of one party to appoint its commissioner, the secretary general might designate the third member upon request of the other party to the dispute; and (4) whether a commission thus constituted would be competent to make definitive and binding decisions in settlement of disputes.

The court, on March 30, answered the first two questions in the affirmative. Questions 3 and 4 were not to be considered unless the three governments should fail to designate commissioners within 30 days from the date of the first opinion. Commissioners were not designated and on July 18 the court gave a second opinion. It stated that the secretary general was not authorized to appoint the "third" member when one of the parties had failed to appoint its national member and that it was therefore unnecessary to consider question 4.

Diplomatic Asylum, Colombia-Peru. On Jan. 3, 1949, Victor Raúl Haya de la Torre, leader of A.P.R.A. (Alianza Popular Revolucionaria Americana) in Peru, who had been accused of promoting a military rebellion about three months earlier, was given asylum in the Colombian embassy as a political refugee. A request by the embassy for a safe-conduct for his departure from the country was denied by Peru on the ground that he was guilty of common crimes. On Aug. 31, 1949, the two governments agreed to submit the dispute to the court. In the proceedings both governments invoked, *inter alia*, the 1928 Havana Convention on Asylum. Colombia asked the court to declare: (1) that, as the state granting asylum, its qualification of the nature of the offence was binding on Peru; and (2) that Peru was bound to give the necessary guarantees for the safe departure of the refugee.

Peru asked that these contentions be dismissed and, as a counter-claim, contended that the grant of asylum was in violation of articles 1 and 2 of the Havana convention, and in any case its maintenance was contrary to the treaty. Article 1 of the convention prohibited the granting of asylum to persons accused of common crimes. Article 2 recognized political asylum but provided that it might not be granted except in



Seven of the judges of the International Court of Justice during the hearing of cases concerning the alleged violation of the peace treaties with Bulgaria, Hungary and Rumania, March 1950. Left to right, M. Zoričić (Yugoslavia), G. H. Hackworth (U.S.), J. G. Guerrero (El Salvador), J. Basdevant (France), A. Alvarez (Chile), B. Winiarski (Poland), and C. de Visscher (Belgium).

urgent cases and for the period of time strictly indispensable for the person to ensure in some other way his safety.

The court, on Nov. 20, rejected Colombia's two submissions It also rejected that part of Peru's counter-claim which was based on article 1 of the convention, since it had not been shown that the refugee had been accused of common crimes prior to the grant of asylum. It found, however, that asylum was not justified under the urgency provisions of the convention. (*See* INTERNATIONAL LAW; UNITED NATIONS.)

(G. H. H.)

INTERNATIONAL LABOUR ORGANIZATION. The International Labour conference continued to be the central feature of I.L.O. activities in 1950. It met in Geneva from June 7 to July 1, with 52 of its 62 member states represented. Two new members, Indonesia and Vietnam, were admitted during the conference. Advisers and representatives of the United Nations and other specialized international agencies also attended. The director's report stressed the topic of " Productivity of Labour." Delegates agreed that the I.L.O. could and must help to increase production in highly industrialized countries, as well as in less developed areas, by a world-wide sharing of techniques to increase output. In addition to that of productivity of labour and better distribution of its product, the subjects of migration and technical assistance were the chief themes discussed at the conference.

The conference adopted no new convention and only one recommendation, no. 88, concerning the vocational training of adults, including disabled persons. Under its double discussion procedure, however, two topics were debated: minimum wage-fixing machinery in agriculture, and equality of remuneration for men and women workers for work of equal value. The work of the conference as a whole consisted chiefly in stock-taking, appropriate to its 30th anniversary year, and in intensification and integration of its new role as a specialized agency of the United Nations. Preparation for action in the annual and regional conferences and the operational activities of the I.L.O. took much of the conference's time and attention.

The preliminary migration conference held in Geneva during April-May had shown how Europeans who found no employment at home could emigrate to oversea countries through the help of I.L.O. agencies. Appreciation of the practical results of I.L.O. migration work was shown in the $1 million fund provided by European immigration and emigration countries for technical assistance. This fund was in addition to the I.L.O. regular budget for 1950 and 1951.

The budget voted for 1951 by the International Labour conference was $6,219,506, about $300,000 more than that for 1950; the increase was caused chiefly by higher costs of carrying out its work.

The committee of experts on the application of conventions and recommendations reported for the first time, under article 19 of the revised constitution, on the annual reports required on unratified conventions and on recommendations, as well as on particulars for the submission to competent national authorities of the conventions and recommendations adopted by the conference in 1948. The conference committee had the same material together with the report of the experts. All agreed that, although the new requirement imposed greater burdens on both the experts and the conference committee, it yielded worth-while results, but the annual reports required by article 22 of the constitution on ratified conventions were still considered of great importance. Of the 98 conventions previously adopted and including those of the 32nd conference (many not yet in force) 89 were listed as the total adopted from 1919 to the end of 1948 and still open for ratification. The total number of ratifications to Oct. 30, 1950, was 1,152, an increase of 105 for the conference year (June 1949-June 1950) and of 108 for Nov. 1949 to Oct. 1950. The new reports on six unratified conventions and six recommendations adopted by the conference in 1948 showed the need for more thorough examination by governments of the possibilities of ratification. Only a third of the members had submitted all these instruments to their legislatures.

The governing body held its usual four sessions (Jan. 3-7 in Mysore, India; March 8-11 and June 2-30 in Geneva; Nov. 13-25 in Brussels) and accomplished a difficult task in implementing the decisions of the Asian Regional conference at Nuwara Eliya, Ceylon, in January, with its 16 resolutions applying I.L.O. principles and agreements to Asian conditions. It also reviewed and implemented the work of the industrial committees and approved 15 fellowships.

BIBLIOGRAPHY. *International Labour Review* (monthly), *Industry and Labour* (bimonthly), the *Legislative Series*, the *Industrial Safety Survey*, the *Year Book of Labour Statistics*, the *Official Bulletin*, and other regular publications appeared as usual. (S. McC. L.)

INTERNATIONAL LAW. During 1950 international law continued to develop in the direction of the law of a world federation, although it could hardly be said that international politics manifested a similar tendency. Among developments of importance were the clarification of the concept of aggression; the exercise of the authority of the United Nations to determine aggression and to take forcible measures to suppress it; the emancipation of the United Nations, at least in part, from the crippling influence of the veto; the drafting of a Covenant on Human Rights with procedures of implementation; the nullification by national courts of local legislation contrary to the United Nations charter provisions protecting human rights; the interpretation of international constitutional instruments effectively to fulfil their purposes; and the increased activity of the International Court of Justice (*q.v.*) and the International Law commission in applying and codifying international law.

Collective Security. The rapid decision of the Security council of the United Nations in June 1950, taking advantage of the voluntary absence of the Soviet delegation, that the Communist government of North Korea was guilty of aggression against the Republic of Korea, and the rapid organization with U.S. leadership, of military forces under the United Nations flag to implement this resolution marked the most positive application of collective security to that date. The international law of collective security had been observed, but the intervention of Communist China in Korea raised doubts whether the political situation in the world was yet adapted to that law.

Neither the U.S.S.R. nor the Chinese Communist government had in any way taken part in the Security council's decisions of June 1950. On the contrary they made it clear that they did not accept the decisions, and considered North Korea to have been the victim of aggression instituted by the U.S. and the Korean republic. The power of the Communist bloc was such that the United Nations could not confine the operation to one of policing to suppress aggression if the opposing bloc intervened, as eventually it did; nor could decisions determining aggression be made at all if a Communist power took part in the Security council and exercised its veto. These two weaknesses in the law of collective security were recognized and efforts were made in the fifth assembly to remedy them. The assembly passed on Nov. 3, 1950, the "Uniting for Peace" resolution initiated by the U.S. This provided for emergency meetings of the general assembly on 24-hr. notice to make recommendations concerning aggression if the Security council were unable to function. Furthermore, member states were called upon to earmark forces for policing purposes and the United Nations was to establish a Peace Observation commission to report actual or potential aggressions and a Collective Measures committee to report on methods to maintain international peace and security.

The assembly also passed, on Nov. 17, 1950, a resolution initiated by Yugoslavia recommending that states engaged in hostilities declare within 24 hr. a readiness to discontinue military operations and to withdraw their forces and to authorize the United Nations Peace Observation commission to supervise such action. This method of stopping hostilities, or if unsuccessful, of providing evidence for determining the aggressor, had been utilized by the League of Nations and resembled the procedure in article 40 of the charter authorizing the Security council to call upon states engaged in hostilities to observe provisional measures to stop the fighting. This resolution also dealt with a Soviet proposal to define aggression by referring it to the International Law commission for study.

These resolutions defining both the legal and political aspects of collective security and augmenting the role of the general assembly, in which no country had a veto in this regard, must be regarded as further steps in developing the new international law based upon the assumptions stated in the first Hague convention of 1899 that there is a "solidarity uniting the members of the society of civilized nations" and that the chief interest of that society is to "obviate as far as possible recourse to force in the relations between the states."

Sources of International Law. The direction of international law depends in no small measure upon the criteria applied in interpreting and applying written instruments and customary rules under changing conditions. If the sovereignty of nations is assumed and international rules and instruments are construed to invade that sovereignty as little as possible, progress toward a law-governed world reaching down to the individual will be slow. If on the other hand, such instruments and rules are construed, so far as possible, to realize the purposes and needs set forth in general statements of principle, progress will be more rapid. The issue had been defined as that of "restrictive" *v.* "effective" interpretation. Practice during 1950 illustrated a preference for "effective" interpretation in a number of instances.

The International Court of Justice, in an advisory opinion, held that South-West Africa remained in the status of a mandated territory. Since, however, that status implied an international agency of supervision and the League of Nations designed for that role no longer existed, the court found that the principle of effectiveness justified substitution of the United Nations for the League of Nations. South Africa was, therefore, obliged to administer the territory in accord with the mandate and to report to the general assembly of the United Nations. But South Africa was not obliged to change the mandate to a trusteeship. The charter was so explicit on the voluntary character of such a transfer that the principle of effectiveness could not be applied.

A memorandum by the secretary general of the United Nations published March 8, 1950, concerning the representation of China also urged that international law be interpreted by the principle of effectiveness. Though acknowledging that recognition of a new government was a political question, the secretary general felt that the representation of a member in the United Nations should be governed by the legal principle which attached prime importance to effectiveness in carrying out the purposes of the charter. "In essence, this means an inquiry as to whether the new government exercises effective authority within the territory of the state and is habitually obeyed by the bulk of the population." The assembly considered a resolution introduced by Cuba which, as amended by Uruguay, modified the criteria proposed by the secretary general. This resolution specified among other factors to be taken into consideration in deciding upon the representation of a member: (1) the extent of effective control over territory and acceptance by population; (2) willingness to accept responsibility for the discharge of charter obligations; and (3) extent to which authority had been established by internal processes. After extensive debate the general assembly approved on Dec. 14 a resolution which said merely that the assembly was the organ of the United Nations best qualified to decide upon the representation of a member and that it should consider the question "in the light of the purposes and principles of the charter and the circumstances of each case."

The principle of effectiveness was applied by the California court of appeals in the case of *Fujii* v. *California* (217 Pacific Reporter [2nd], 481; 218 Pac. [2nd] 595) in holding the California Alien Land law inapplicable because contrary to the provisions of the United Nations charter, a treaty binding the U.S.

Status of the Individual. No tendency of modern international law was more discussed during 1950 than that according a legal status to the individual. Effective international procedures for maintaining the status of individuals had not yet been established, although the United Nations Commission on Human Rights, the United Nations International Law commission and the general assembly had discussed the problem at length. The Covenant on Human Rights drafted by the Human Rights commission designed to give legal effect to some of these rights did not provide for direct access to international procedures by the individual, but was to be implemented only on the initiative of governments. Proposals which had been made permitting individuals to petition organs of the United Nations on the basis of the charter provisions or the provisions of the covenant were not accepted by the commission but the general assembly on Dec. 4, 1950, returned the draft to the commission with instructions to consider provisions for petition from individuals

and organizations on alleged violations of human rights.

One of the most important and most difficult human rights to deal with is that of freedom of transnational communication. Efforts had been made to ensure this freedom by conventions, but the Soviet bloc had refused to accept conventional obligations and had attempted to prevent radio or other information coming into their territory and to prevent information going out except through govermental censorship. Juristic discussion of the subject during 1950 indicated the difficulty of solving this problem because of the traditional position of international law permitting states to control incoming and outgoing communications in order to defend themselves from subversive or revolutionary movements and to protect the integrity of their national cultures.

The Genocide convention came into force, but without ratification by the U.S. Certain interpretations insisted upon by the Senate Committee on Foreign Relations were still under discussion in 1950. The International Law commission submitted to the fifth assembly a report codifying the principles of the Nuremberg judgment on war crimes and also dealing with the general topic of crimes against the peace and security of nations and the establishment of an international criminal court. The general assembly provided for a conference at Geneva in Aug. 1951 to draft a convention for an international criminal court.

Rights and Duties of States. Among more conventional problems of international law discussed during the year the following may be mentioned. The formalities of international legislation through a conclusion of multilateral treaties were expedited through the practice of acceptance, a more flexible procedure than those of adhesion, accession and ratification. The problem of reservations to such treaties was faced in connection with the Genocide Convention and the fifth assembly asked for an advisory opinion of the International Court of Justice on the subject.

The International Law commission presented to the fifth assembly recommendations for making the sources of international law more readily available, urging particularly that the assembly provide for an index of the League of Nations and the United Nations treaty series, for a résumé of practices of the United Nations on questions of international law and for a series of reports on international arbitral awards. It also recommended that governments publish digests of their diplomatic correspondence and other materials bearing upon international law.

A British court held that the Tass news agency was immune from local jurisdiction because it was a branch of the Soviet government and not an independent corporation (*Krajina* v. *Tass Agency*, 1949, 2 A.E.R. 274). The state of Amazonas, in Brazil, was denied immunity from an action in France on the ground that it did not enjoy sovereignty (*Dumont* c. *L'Amazone*, 44 A.J.I.L. 421, 1950). The limits of the immunity of friendly armed forces were defined by the Egyptian mixed court holding that such immunity did not apply to acts of commerce or administration (*Aboutebout* c. *Etat Hellénique*, Egypt, 44 A.J.I.L. 420, 1950).

Certain matters concerning the international law of hostilities were considered. A U.S. court held that persons deprived of property under duress in Germany could not gain relief if their claims had been outlawed by statutes of limitations, even though the U.S. diplomatically had favoured the policy of restoring such property (*Bernstein* v. *Nederlandsche-Amerikaansche Stoomvart Maatschappij*, 173 Fed. 2nd 71, 1949). In another case the traditional rule suspending the operation of statutes of limitations during the period of war was applied (*Frabutt* v. *N.Y.C. and St.L. RR Co.*, 84 Fed. Supp. 460, 1949). The rule that a government cannot close ports occupied by insurgents was announced by the Department of State in connection with a protest against the seizure of certain U.S. vessels by Chinese Nationalists while attempting to enter or leave Communist-held ports.

The United Nations International Law commission made progress in codifying the law of treaties, of arbitral procedure and of the régime of the high seas. The International Law association met in London and considered problems of nationality, of the sea bed, of sovereign immunities, of the status of corporations, of air law and of the codification of international law. The Hague Academy of International Law met in the summer of 1950 and paid special attention to problems concerning the relations of international politics and of international organization to international law. (*See* also INTERNATIONAL COURT OF JUSTICE.)

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(Q. W.)

INTERNATIONAL MONETARY FUND.

Marked improvements occurred during 1950 in the earnings and reserve positions of most of the International Monetary fund's 49 member countries, especially those which had devalued their currencies in 1949. This improved trend, which was already conspicuous in the first six months of 1950, was extended during the rest of the year as international trade and payments also felt the effects of stimulated demand arising from increased defence expenditure, especially that in the U.S. In view of the prospective large rearmament expenditure, the fund in its *Fifth Annual Report* and other published statements recommended strong anti-inflationary policies to stabilize the purchasing power of members' currencies and to preserve their economic health. In transmitting this report to the board of governors at the annual meeting in Sept. 1950, the managing director of the fund recommended increased taxation, restriction of investment and credit to essential purposes and the reduction of less essential government and private expenditure.

The fund also felt a relaxation by some member countries of their exchange restrictions was justified. Moreover, as financial adviser to the contracting parties to the General Agreements on Tariffs and Trade (G.A.T.T.), the fund pointed to the increased earnings and improved reserve positions of certain countries as justifying a progressive relaxation in the level of discriminatory trade restrictions.

During 1950, the fund's membership was increased to 49 countries, following the admission of Pakistan with a quota of $100 million and Ceylon with a quota of $15 million and the resignation of Poland. Total quotas in the fund, with these changes, amounted to the equivalent of $8,036·5 million. Of this amount, approximately $1,494 million was held in gold and $5,534 million in members' currencies; about $1,003 million in gold and currencies was not yet due from members whose initial par values had still to be agreed upon.

Foreign exchange transactions of the fund, from the beginning of operations in March 1947 to the end of 1950, totalled the equivalent of $777,283,000. Of this, approximately $759,830,000 represented sales by the fund of U.S. dollars, the equivalent of $11,408,000 represented sales of Belgian francs and $6,045,000 represented sales of British pounds. However, there were no sales of currency by the fund in 1950 except in connection with repurchases by member countries of their own currencies. Three countries repurchased amounts of their own currency from the fund during 1950 with gold and dollars. The payments were made by Belgium ($12,100,000 in U.S. dollars and $8,500,000 in gold), Egypt ($7,678,163 in U.S. dollars and $829,766 in gold) and Ethiopia ($300,000 in U.S. dollars).

There was announced concurrence by the fund during the year in par value changes for the Ecuadorian sucre, Icelandic

króna and the British Honduras dollar, and in various exchange rate modifications involving the currencies of Austria, Bolivia, Chile, Persia and Nicaragua. The fund agreed to an extension of Canada's gold mining subsidy programme, at a reduced rate, to the end of 1951. The fund published in May 1950 the recommendation of its executive board advising against the adoption of a proposal for a change in the fund's gold policy on external transactions in gold at premium prices which had been made by the Union of South Africa at the board of governors' meeting in Sept. 1949, calling for sanction by the fund of the sale by member countries of one-half of all newly-mined gold production in foreign markets at premium prices. In addition to concluding that no change in the fund's gold policy was desirable, the executive board stated that in its view there was no economic justification for recommending to the board of governors a uniform change in the par values of all currencies in relation to gold. The position of the executive board was upheld by the board of governors at its fifth annual meeting in Paris in Sept. 1950.

During the year the fund published the first of its annual series of reports on exchange restrictions, as required by its articles of agreement. Its work in this and other related fields of exchange and trade restrictions was made the responsibility of a new exchange restrictions department. Another publication begun during the year, entitled *Staff Papers*, makes available selected studies prepared by the staff for the information and use of the fund and its officials.

The fund maintained interest in the creation and early operations of the European Payments union, being concerned especially with its effects upon general multilateral exchange convertibility and non-discriminatory exchange and trade practices, which are the fund's objectives.

At the 1950 annual meeting of the governors, regular biennial elections were held to appoint 9 executive directors for a two-year term to represent the 44 members who do not appoint directors. (*See* also INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT.) (A. N. O.)

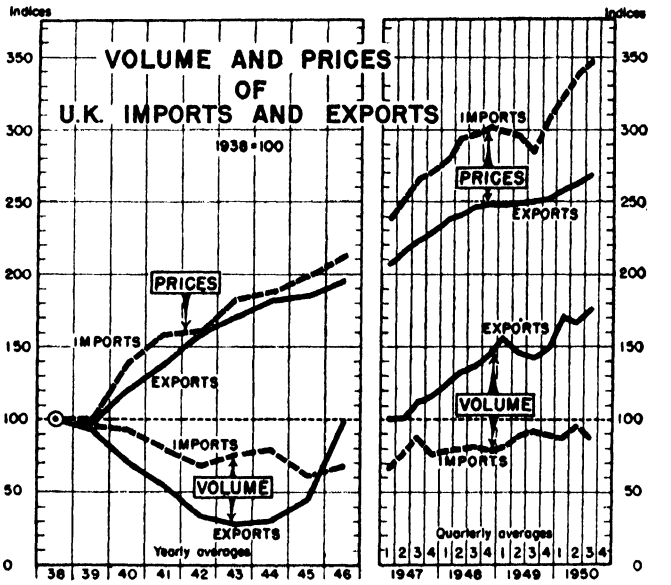
INTERNATIONAL RED CROSS: *see* RED CROSS.

INTERNATIONAL REFUGEE ORGANIZATION: *see* REFUGEES.

INTERNATIONAL TRADE. The value of world exports totalled approximately $54,900 million in 1949 and $51,200 million in the first half of 1950, at an annual rate. The volume* of exports in the first six months of 1950 was, however, actually 5% greater than in 1949 because of a lower price level in terms of dollars. After the termination of World War II, 1949 was the first year in which the volume of world trade exceeded prewar levels. The volume of world exports in that year was 8% higher than in 1937.

In the first half of 1950 progress was made in the direction of international equilibrium. The world trade deficit as indicated by the United States export surplus fell to $2,200 million, at an annual rate. Decreasing exports from the United States and increasing exports of other countries reduced the United States share of world exports to 19% of the total.

The war that started in Korea shortly after mid-year greatly affected world trading relationships. The defence programme of the western nations stimulated their purchases of raw materials. The prices in world markets of these and other commodities, which had already started to rise, advanced sharply. United States imports rose rapidly and, in the third quarter of the year, United States merchandise transactions came into balance for the first time since 1937. For the year as a whole the United States merchandise export surplus fell to $1,400 million. Increased sales to and decreased buying from the United States, U.S. financial assistance totalling more than $4,000 million in 1950 and a capital outflow from the U.S. combined to enable other countries to add $3,600 million to their gold and dollar reserves. Over the course of the year these countries regained 50% of the $7,200 million in gold and dollar assets sold to the U.S. from the beginning of 1946 to the end of 1949. Headway was thus made toward currency convertibility. (*See* also GOLD.)



As a further step in international trade agreement negotiations, the third round of tariffs negotiations within the framework of the General Agreement on Tariffs and Trade began at Torquay, Great Britain, on Sept. 28, 1950. (*See* also TARIFFS.)

United Kingdom. The value of the merchandise trade of the United Kingdom reached record levels in the first nine months of 1950. Exports of United Kingdom merchandise totalled £1,566 million, as compared with £1,315 million for the same period in 1949. Imports increased by 13% from their 1949 value. The volume index, with 1947 as the base year, showed exports for the January-September period of 1950 to be nearly 160 as compared with 139 for the same period in 1949. During the first nine months of 1950 the volume of retained imports, although slightly higher than in the previous year, was still below the prewar level.

The trade deficit with the United States which had averaged £13,500,000 per month prior to devaluation in Sept. 1949 narrowed in the first nine months of 1950. This was a result both of increased British exports to the U.S. and a tight restriction on dollar imports. The devaluation of the pound sterling in Sept. 1949 gave some impetus to these developments. An important factor in the increase in value of U.S. imports from the sterling area was the stepped-up U.S. stockpiling of critical sterling area raw materials which drew on stocks in the United Kingdom as well as on current production in the other sterling area sources. Exports from the U.S. to the United Kingdom and the rest of the sterling area fell, in large measure because of stringent reductions in dollar imports put into effect by most of the sterling area countries at the end of 1949 when their gold and dollar reserves were at a record low level. These changes in value and volume of trade resulted in large net dollar earnings which contributed substantially to the improvement in the gold and dollar reserves of the sterling area.

Britain's trade deficit with its other chief dollar creditor, Canada, which in 1949 had been nearly as great as that with the United States, was decreased even more appreciably during the first nine months of 1950.

* Volume as used in this article refers to value figures adjusted for changes in the price level.

TABLE I. VALUE OF TRADE OF THE UNITED KINGDOM WITH PRINCIPAL COUNTRIES*
(£ sterling, million)

Country	Imports†		Exports‡	
	1949	1950	1949	1950
Argentina	51·1	76·8	35·7	27·5
Australia	157·3	154·8	133·8	186·4
Belgium	30·2	27·5	25·4	37·4
British West Africa	73·2	79·7	46·2	46·3
Canada	156·6	132·1	57·9	89·0
Ceylon	20·1	18·9	10·8	12·2
Denmark	57·5	76·4	34·4	48·3
Egypt	26·4	24·8	27·2	32·1
France	54·5	78·6	24·5	32·8
India, Pakistan, etc.	80·1	87·7	123·6	98·7
Ireland	39·3	43·1	55·8	64·5
Netherlands	48·5	62·7	38·7	52·7
Netherlands West Indies	30·3	33·1	1·8	2·9
New Zealand	96·1	113·9	44·8	62·6
Norway	16·7	20·6	30·7	40·7
Sweden	45·8	46·4	33·4	56·3
Union of South Africa	24·6	36·5	106·4	83·8
United States	163·0	147·8	37·0	74·6
Other countries	514·9	647·1	447·3	518·1
Total	1,686·2	1,908·5	1,315·4	1,566·9

* All figures for period Jan.-Sept. † General imports. ‡ United Kingdom produce.

Canada. In 1950, for the first year since 1931, Canada's imports exceeded exports. The import surplus of about $56 million (in terms of Canadian dollars, used throughout this section) was very small, however, relative to total trade. Imports totalled $3,174 million, in comparison with $2,761 million in 1949; exports amounted to $3,118 million as compared with $2,993 million in the preceding year. There occurred during the year a substantial expansion in shipments to the United States which nearly wiped out Canada's traditionally heavy import surplus with that country.

The currency changes of Sept. 1949 were of considerable importance in imports, particularly in the case of imports from the United Kingdom. In 1950 the value of receipts from the United Kingdom increased 31% over 1949. Imports also increased from other European countries, notably Belgium, the Netherlands, Germany and Sweden.

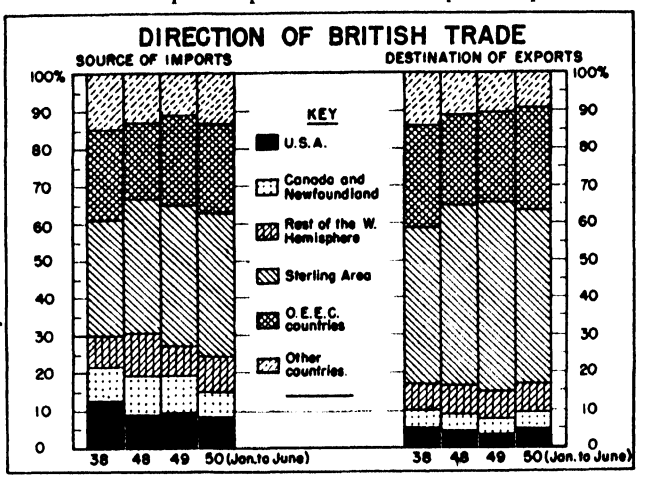
Trade with the United States accounted roughly for about two-thirds of both imports and exports. Even in 1947 imports from the United States, which totalled slightly less than $2,000 million, were almost twice as large as exports to that country. Drastic import restrictions were imposed in order to end the exchange drain. In 1950 imports from the United States were slightly higher than in 1947, but the trade deficit fell to $120 million. In three years the value of Canadian shipments to the United States had increased by more than $900 million. In 1950 alone the value of exports to the United States rose 34% over that of 1949.

Canadian gold and dollar reserves continued to gain markedly during the year, and the improvement attracted an increased inflow of speculative capital. When the volume of incoming United States funds assumed large proportions through September, the government abandoned the official pegging of the exchange at 90·9 U.S. cents and from Oct. 1 permitted the currency to be quoted in free markets until further notice. It also suspended the remaining restrictions on imports of consumer and capital goods from the United States, to take effect on Jan. 2, 1951. The trade was thus made free of direct restrictions for the first time since Nov. 18, 1947.

Australia and New Zealand. During the first ten months of 1950 there was a considerable increase in the value of Australia's exports and imports as compared with 1949; the trade balance remained relatively unchanged. Exports were £A 581 million, a 35% rise over the £A 430 million ten months' total of the previous year. Imports of £A 524 million, in contrast to £A 371 million in 1949, had risen 41%. New Zealand experienced much the same type of development as Australia.

Union of South Africa. The year 1950 saw a marked improvement in the Union of South Africa's balance of payments position, and this was reflected by a gradual relaxation of import controls which applied mainly to goods of soft currency origin In September, however, the government announced a further liberalization of controls as from Jan. 1, 1951, which appeared to open the way for an increased volume of hard currency imports.

Europe. the total value of imports into countries participating in the Organization for European Economic Co-operation (O.E.E.C.) during Jan.-Oct. 1950 amounted to $19,500 million; the value of exports during the same period was $15,500 million. In 1949 imports for this area amounted to $24,800 million as compared with exports of $18,800 million. The export-import ratio, with exports expressed as



percentages of imports, which was 75% in 1949 rose to almost 80% for the first ten months of 1950. It was significant that western Europe had surpassed the 1938 trade ratio when the export-import ratio was 75%.

Of greater importance were the noticeable shifts in the export and import patterns of the O.E.E.C. countries. In 1949 and in 1948 more than 22% of western European imports originated in the United States and Canada; for the period Jan.-Oct. 1950, imports into the O.E.E.C. countries from this area declined to 16%. Exports from western Europe to the United States and Canada rose from 6·2% in 1949 to more than 8% in 1950; in 1938 this percentage was 7%.

Trade between the Marshall plan countries and the "iron curtain" countries declined from the level of 1949. In 1938, 9·6% of western Europe's total imports came from eastern Europe, while in 1950 only 4·6% of its imports came from this area; a similar decline occurred with regard to exports of western Europe to "iron curtain" countries. (*See* also EASTERN EUROPEAN ECONOMIC PLANNING.)

Of great importance to the economic progress of western Europe was the trade among the participating E.R.P. countries. A major step in furthering this trade was the putting into operation of the European Payments union in the middle of 1950. In effect, this union facilitated credit and multilateral clearing arrangements among the participating countries, which in turn made possible a greater interchange of goods. Imports within the O.E.E.C. area rose from 35% in 1949 to 40% in the period Jan.-Oct. 1950, while exports correspondingly rose from 46% to 49% in these periods. For the first time since the end of World War II, trade among the E.R.P. countries reached the pre-World War II activity.

At the end of 1950, the past year and a half had witnessed, in quick succession, a major devaluation of currencies, the

outbreak of the Korean war, the formation of the European Payments union, the removal of quantitative restrictions on a sizable proportion of imports from member countries, a sharp rise in prices in the latter half of 1950, and the beginning of preparations for a vast rearmament programme in western Europe. The levels of production and national income in western Europe had also risen in 1950 beyond the prewar level. (*See* EUROPEAN RECOVERY PROGRAMME.)

TABLE II. PERCENTAGE DISTRIBUTION OF FOREIGN TRADE OF METROPOLITAN O.E.E.C. COUNTRIES

Country or area	1938	1948	1949	1950* Jan.-Oct.
Imports from				
United States	11·1	18·2	18·0	13·5
Canada	4·2	4·7	4·3	2·8
Central America	1·0	1·8	1·4	1·6
South America	7·4	8·0	5·5	6·3
O.E.E.C. countries	39·0	32·1	35·2	39·9
Overseas dependent territories	8·4	11·8	11·5	12·6
Eastern Europe	9·6	5·5	5·4	4·6
All other countries	19·3	17·9	18·7	18·7
Value in $ millions	12,242·4	24,561·6	24,794·1	19,522·1
Exports to				
United States	5·2	5·6	4·2	5·8
Canada	1·7	2·1	2·0	2·3
Central America	0·9	0·7	0·6	0·8
South America	6·2	6·7	6·3	5·9
O.E.E.C. countries	50·5	45·3	46·1	49·4
Overseas dependent territories	6·6	12·8	13·5	12·0
Eastern Europe	9·8	5·6	6·0	5·0
All other countries	19·1	21·2	20·3	18·8
Value in $ millions	9,115·2	16,770·0	18,762·0	15,519·7

* Preliminary data.

United States. Merchandise exports and imports of the United States were more closely in balance in 1950 than in any other year in the preceding decade. Exports of $10,300 million were 15% lower than in 1949, and imports totalling $8,800 million increased 34%. The resulting export surplus of $1,400 million was one-fourth the size of the surplus in the previous year.

Export prices which had reached their post-World War II peak in 1948 declined throughout 1949 and in the early months of 1950. In June the unit value of exports began to advance and by November had increased 9% over the low point reached in May. The volume of exports in the first 11 months of 1950 was 14% smaller than in the comparable 1949 period.

Imports into the United States rose in each quarter of the year, reflecting in the earlier months an increase in demand for consumers' goods and for raw materials both for current use and inventory restocking, accompanying improved business activity and, after the Communist aggression in Korea, the speed-up of the armament programme. By the last quarter of the year imports were running at an annual rate of nearly $10,500 million in comparison with $6,600 million in 1949 and $7,100 million in 1948. The unit value index of imports began to advance in Dec. 1949, rose 5% by May 1950 and 26% by November, from November of the previous year. The volume of imports, Jan.-Nov. 1950, was 24% higher than in the same months of 1949.

In the months Jan.-Nov. 1949 the United States had an export surplus in its trade with each of the principal trading areas. In the same months in 1950 an import surplus of $265 million developed with the Latin American republics, $101 million with Asia, $58 million with Oceania and $117 million with Africa. Trade with Canada came more nearly into balance than it had in many years. Exports exceeded imports by only $60 million. The export surplus in the trade with Europe totalled $1,400 million as compared with $2,900 million in the comparable period in 1949.

TABLE III. GEOGRAPHIC DISTRIBUTION OF U.S. FOREIGN TRADE

Country or area	($ million) Jan.-Nov. 1949	1950	Per cent. of total 1936-38 11-months average	Jan.-Nov. 1949	1950
Exports, total*	11,097·7	9,216·0	100·0	100·0	100·0
Western hemisphere	4,482·3	4,353·9	33·9	40·4	47·2
Canada	1,813·9	1,829·7	15·6	16·3	19·9
Latin America†	2,502·2	2,394·3	16·3	22·5	26·0
Europe	3,790·4	2,666·4	41·9	34·2	28·9
United Kingdom	645·6	475·7	16·8	5·8	5·2
Other Europe	3,144·8	2,190·7	25·1	28·3	23·8
Asia	2,074·3	1,417·8	16·8	18·7	15·4
Oceania	176·4	127·7	3·1	1·6	1·4
Africa	574·3	318·2	4·3	5·2	3·5
E.R.P. countries‡	3,751·7	2,610·7	38·1	33·8	28·3
Sterling area	1,722·8	1,193·4	28·2	15·5	12·9
Imports, totals§	6,017·5	7,973·2	100·0	100·0	100·0
Western hemisphere	3,612·2	4,601·0	37·2	60·0	57·7
Canada	1,405·8	1,770·3	14·1	23·4	22·2
Latin America†	2,080·0	2,659·7	21·8	34·6	33·4
Europe	844·0	1,232·1	28·5	14·0	15·5
United Kingdom	206·4	304·6	7·0	3·4	3·8
Other Europe	637·6	927·5	21·5	10·6	11·6
Asia	1,146·0	1,519·1	30·1	19·0	19·1
Oceania	112·2	185·5	1·6	1·9	2·3
Africa	303·1	435·5	2·7	5·0	5·5
E.R.P. countries‡	765·8	1,116·8	24·4	12·7	14·0
Sterling area	1,052·3	1,434·6	30·8	17·5	18·0

* Includes re-exports. Beginning July 1950 data by countries and areas exclude "special category" exports amounting to $332 million or 3·6% of total exports. † Includes Canal Zone. ‡ Metropolitan territories. § General imports.

Latin America. The foreign trade of the Latin American republics again assumed an upward trend in 1950 after a decline in 1949 from the record levels attained in 1947 and 1948. The year began with the heavy import demand of many of the countries held in check by import controls imposed because of the shortage of gold and foreign exchange reserves. On the export side the increase in coffee prices which began in the fall of 1949 was in contrast to the declining price trend for many of the other principal export commodities of the area. However, the developments in Korea resulted in marked changes in the trade of the area in the second half of 1950, and available statistics indicated that the value of exports increased considerably in 1950 as compared with 1949, while imports showed a smaller increase.

During the latter half of 1950 world conditions brought about higher export prices and greater demand for Latin American products such as copper, tin, lead, wool and cotton. The easing of import controls, influenced by the increased supply of foreign exchange thus made available, was hastened in a number of the countries by the desire to make heavy purchases of goods in potentially critical supply before the expected supply shortages and extension of United States export controls.

For the first time since 1947 the trade of the United States with the Latin American republics reverted in 1950 to its traditional status, an import balance. The excess in value of U.S. imports over exports to the area was $240 million for the first 9 months and $267 million for the first 11 months of 1950. Price rises, particularly of coffee, were principally responsible for the increase of 26% in the value of U.S. imports from the Latin American republics during Jan.-Sept. 1950, as compared with the same period of 1949. Here again the trend in the latter half of 1950 was marked, showing a rise over the comparable period of 1949 of 63% in the third quarter and 37% in October and November.

Available data indicated that the Latin American republics continued in the first half of 1950 to expand the proportion of their purchases made in countries other than the U.S. It was believed, however, that the share of the U.S. increased in the latter part of the year as supply difficulties interferred with imports from Europe and barriers against imports from the U.S. were lowered. Purchases by the U.S. accounted for about 43% of total exports from the area in 1949, and this

proportion apparently increased in 1950 as stockpiling and inventory replenishment proceeded.

Middle East. The foreign trade of many middle east countries during 1950 remained at a comparatively high level, according to partial data for the year. Turkey reduced its trade deficit, chiefly because of increased exports, as imports remained large. Greece's exports continued to lag, although an improvement occurred in the later months of the year. Persia encouraged imports in the latter part of the year, partly as an anti-inflationary measure, but exports did not keep pace, causing a shortage of foreign exchange. Israel's imports were affected by a shortage of foreign exchange, while exports remained at a fair level. Egypt's imports expanded in anticipation of possible shortages, and exports were aided considerably by the price rise and strong demand for raw cotton.

Far East. The serious imbalance between imports and exports which had characterized the postwar trade of the far east was greatly reduced during 1950. Reduction of the heavy import balance was largely the result of the following factors: continued dollar aid from the U.S., further effects of the sterling devaluation of Sept. 1949, drastic import and exchange controls in certain countries, and, after the outbreak of the Korean conflict, the strong world demand for far eastern raw materials at greatly increased prices.

Japan's merchandise trade in 1950 was characterized by an increase over 1949 in both volume and value and a marked narrowing of the gap between imports and exports compared with previous postwar years. During the year important modifications were made in control over Japan's import trade, resulting in a shift of a greater portion of trade conducted on a private basis; Japanese nationals participated more directly in various activities related to foreign trade.

Mainland China's trade, estimated from statistics of trading partners, indicated a comparative balance with both imports and exports at about U.S.$ 250 million for the first three quarters of 1950, exclusive of a sizable trade with eastern Europe, on which statistical information was unavailable.

Because of drastic import and exchange controls, Philippine import trade declined about 35% in 1950. Coincident with an appreciable increase in export values following the outbreak of war in Korea, the decline in imports caused a material reduction in the heavy postwar import balance and, together with continued though lessened disbursements by the U.S., was also responsible for the largest surplus since 1945 in the international balance of payments position at the close of 1950.

Indo-China continued to have a large deficit in the balance of trade. Thailand again recorded a substantial balance of trade surplus. Malaya, principal dollar earner of the sterling area, experienced a trade boom in 1950 following developments in Korea.

Throughout 1950 the foreign trade of India continued the trends which began with devaluation in Sept. 1949: decreased imports, increased value of exports, and an improved balance of trade position. The trade impasse with Pakistan, after a temporary agreement which expired Sept. 30 was not renewed, reduced the trade of India with that country drastically, confining it practically to imports of raw jute and greatly reduced exports of cotton textiles.

The trade of Pakistan on private account in the year ended June 30, 1950, showed an increase in exports and a decrease in imports from the previous year with a small export surplus. However, the significant trade on government account, which consisted almost wholly of imports, appeared likely to change the balance to an import balance. A large number of trade agreements were executed in a reorientation of Pakistan's trade as a consequence of the trade impasse with India. (*See* also BUSINESS REVIEW; INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT; INTERNATIONAL MONETARY FUND.) (L. K. M.)

INVENTORS, AWARDS TO. The Royal Commission on Awards to Inventors under the chairmanship of Lord Justice Cohen continued to deal with claims referred to it by government departments about the crown's use of inventions, designs, drawings or processes.

PRINCIPAL AWARDS TO INVENTORS, NOV. 12, 1949-NOV. 1, 1950

Recipient	Head of Terms of Reference	Subject	Award
R. Gundlach *et al.*	1	Periscopes for armoured vehicles	£17,500 (in addition to £63,224 15*s.* already received)
Commander C. S. Bell	3	Winged target	£3,000
A. C. Hartley, F. Gill, and D. A. Fox	3	Fido project	£3,000
H. R. Fehling and P. Rosin	3	Fido project	£2,000 jointly
Denny Brothers and Brown Brothers, Ltd.	1	Ships' stabilizers, etc.	£27,500
W. F. Thain	3	Firing gear for submarines, etc.	£1,500
Lieut. Col. L. V. S. Blacker	3	Anti-tank projectiles, etc.	£7,000 (in addition to interim £25,000)
Commander H. de V. Leigh	3	Anti-submarine searchlight.	£6,000
J. F. Baker	3	Morrison shelter	£3,000

The commission's first and second reports (Command Papers 7586 and 7832) contained a survey of principles governing the decisions of the present commission. The commission dealt with claims under (1) head 1, which provides an alternative to the procedure under the Patents and Designs acts, whereby a claimant is entitled to apply to a judge of the high court for the settlement of the terms of use (approximately £171,950 had been awarded under this head); and (2) head 3, where the inventor may have no legal right to compensation but where the invention has been used by or on behalf of the crown and been of exceptional utility, its value having been tested in practice (approximately £280,320 had been recommended under this head, the majority of claims coming under it). (R. G. L.)

INVESTMENTS ABROAD. For the first time since before World War II statistics concerning British investments abroad were published in 1950. While the figures published between 1929 and 1939 were compiled privately under the direction of Lord Kindersley, a director of the Bank of England from 1914 to 1946, the task was assumed after World War II by the statistics office of the Bank of England. The bank's estimates in general covered only investment in securities quoted on the London Stock exchange although it was able to include figures for United States and Canadian dollar securities not quoted in London which had been registered under exchange control regulations. In 1950 figures had been completed up to 1948 and the material was published in a pamphlet entitled *United Kingdom Overseas Investments—1938 to 1948*. Its introductory notes warned the reader that the representation of the capital amount of overseas investments by nominal values gave little indication of the actual realizable value of the investments, but it was a convenient basis for investigating relative changes from year to year.

The result of the investigation showed an uninterrupted decline in Britain's total investment abroad after 1938. At the end of 1938 the total was £3,545 million: ten years later it was down at £1,960 million. The estimates according to categories are shown in Table I. In Table II the estimates of nominal capital invested by countries and of interest and dividends are given for the years 1938, 1946 and 1948.

According to information obtained from exchange control sources British investment in some 2,900 United States companies amounted in 1948 to £117 million nominal, and

TABLE I. ESTIMATES OF UNITED KINGDOM INVESTMENT ABROAD BY CATEGORIES, 1938-48
(in £ millions at end of year)

	1938	*1940*	*1942*	*1944*	*1946*	*1948*
Government and municipal loans	1,521	1,458	1,186	978	859	797
U.K. companies:						
share capital	817	806	792	768	748	596
loan capital	367	335	322	279	255	119
Overseas companies:						
share capital	473	422	351	327	303	304
loan capital	368	318	219	192	164	144
Total	3,545	3,338	2,871	2,544	2,329	1,960

NOTE: Totals may not add because of rounding.

there was £70 million of British capital in some 760 Canadian companies. The figure for the U.S. included dollar securities pledged with the Reconstruction Finance corporation.

Between 1938 and 1948 British investment showed a more or less substantial decline in most countries with the exception of the republic of Ireland, British Central Africa and Persia and of a number of countries whose securities had become unrealizable. The extent of the decrease varied widely. Compared with 1938, the figures for 1948 were down by 86% for Argentina, 82% for India and Pakistan, 72% for the U.S., 61% for Canada, 55% for Mexico, 51% for New Zealand, 50% for Brazil, 36% for the Union of South Africa and 24% for Australia.

These figures did not give, in themselves, an adequate idea of the full extent of the adverse change in Britain's international capital position. Apart from the substantial decline in overseas investments, there was a much more substantial increase of overseas indebtedness. In addition to the loans from the U.S. and Canada, the international floating debt represented by sterling balances and short-term investments owned by overseas holders had risen by 1948 to about twice the amount of Britain's remaining overseas investments Nor was there any improvement during 1949 and 1950. The process of the liquidation of overseas investments continued. Further blocks of Brazilian, Uruguayan and other securities were repatriated. Great Britain continued to borrow from the U.S. under the European Recovery programme, and also from Canada. Although substantial amounts of wartime sterling balances were repaid to such holders as India, Pakistan and Ceylon, the balances of other countries increased further, so that there was no substantial net change in that respect. Moreover, a substantial number of Britain's overseas debtors were in complete default. The annual report of the Council of Foreign Bondholders for 1949 estimated the capital sum of defaulted debts at £500 million. The report pointed out that little progress had been made towards improving the prospects of the British creditors of Germany and Japan; that the position in China remained obscure; and that prolonged negotiations about default by smaller debtors had not resulted in any settlement. After the publication of the report the position deteriorated further as far as China was concerned and there was little hope of saving more than a fraction of the British capital invested in that country. Nor was there much hope of receiving adequate compensation for British enterprise nationalized in Burma.

Great Britain's international revenue position in 1950 was not nearly as unsatisfactory as her international capital position. This was largely due to the fact that interest on the dollar loan of 1945 was not yet payable and that the bulk of the international floating debt was in the form of sterling balances or Treasury bills on which the interest rate was very low. According to the figures published in *National Income and Expenditure of the United Kingdom—1946 to 1949* (H.M.S.O., London, April 1950) the amount of dividends, interest and rent paid to the United Kingdom during 1949 was £168 million, while the corresponding amount paid by the United Kingdom to overseas recipients was £118 million, showing a net surplus of £50 million. The total of interest and dividends received on British holdings of overseas securities in 1948 was estimated by the Bank of England at £116·4 million, as compared with £155·4 million ten years earlier.

Since most of the British overseas investments were in sterling denomination the devaluation of sterling did not affect materially the nominal amount of the capital or revenue. On the other hand, since a large proportion of British overseas debts were in terms of U.S. or Canadian dollars, the devaluation resulted in a worsening of the international position both on capital and revenue account.

(P. EG.)

TABLE II. UNITED KINGDOM INVESTMENT ABROAD, ALL SECURITIES BY COUNTRIES: (a) NOMINAL CAPITAL AT END OF YEAR; (b) INTEREST AND DIVIDENDS

	1938		1946		1948	
Commonwealth, Republic of Ireland and Burma	(a)	(b)	(a)	(b)	(a)	(b)
Republic of Ireland	16	·8	18	·8	20	·9
British West Africa	55	4·3	49	3·9	47	3·6
Anglo-Egyptian Sudan	17	·9	12	1·1	11	1·0
British East Africa	24	1·0	19	1·0	15	1·3
British Central Africa	73	5·9	69	5·4	79	7·4
South Africa	199	17·5	118	12·8	127	15·0
India	388	18·5	77	7·7	60	5·7
Pakistan					9	·6
Burma	20	2·1	14	·4	14	·5
Ceylon	28	1·7	25	2·3	26	2·4
Malaya	67	4·0	64	·9	64	3·8
Australia	520	22·2	429	17·4	397	17·3
New Zealand	134	5·8	83	4·0	66	3·1
Canada	420	15·9	189	8·4	162	7·6
British West Indies	21	1·3	18	1·2	21	1·5
Other	18	·9	15	·7	8	·5
Total	1,998	102·7	1,199	68·2	1,125	72·2
Foreign Countries						
France	11	·4	8	·2	7	·4
Germany	45	2·0	43	—	43	—
Austria	11	·5	9	·3	8	·7
Denmark	14	·6	8	·9	7	·3
Norway	11	·4	6	·4	4	·4
Hungary	16	·4	14	—	14	—
Rumania	19	·4	16	—	16	—
Greece	26	·4	24	*	24	*
Rest of Europe	64	2·4	50	1·6	44	1·8
China	37	1·5	37	·1	36	·1
Japan	50	2·6	46	—	46	·1
Netherlands East Indies†	24	1·2	23	·1	23	·1
Persia	34	5·2	34	7·2	34	7·2
Egypt	10	·6	4	·4	7	2·1
United States	268	7·1	80	5·6	75	7·9
Mexico	66	·4	32	·6	30	·9
Cuba	28	·1	25	·1	24	·1
Argentina	368	7·8	312	7·2	51	5·2
Brazil	164	1·6	103	3·9	82	2·6
Chile	63	·9	53	·9	47	·7
Peru	25	·4	23	·5	22	·3
Uruguay	23	·4	22	·5	22	·4
Rest of South America	37	1·7	33	2·2	36	2·4
Other	40	1·5	31	1·4	34	1·7
Total	1,455	40·3	1,035	34·1	735	35·5
Not Classifiable	93	12·5	95	7·8	99	8·6
Total	3,545	155·4	2,329	110·1	1,960	116·4

* Less than £50,000. † Indonesia.
NOTE: Totals may not add because of rounding.
SOURCE of material in Tables I and II: *United Kingdom Overseas Investments—1938 to 1948*, Bank of England, London, 1950.

United States Investments Abroad. The value of U.S. investments in foreign countries (and international organizations) was approximately $32,700 million at the beginning of 1950 and aggregated roughly $500 million more at the middle of the year. The flow of private and government investments abroad during the first half of 1950 was at a lower rate than in 1949 but there were indications that more new investment was made in the second half of the year. The growth in the total value of U.S. investments abroad during 1950 therefore, probably compared favourably with

the rise of $1,500 million recorded for 1948. The bulk of this growth was for the account of private organizations and individuals, as it was in 1949. In previous postwar years, the government had supplied 88% of the long-term capital invested abroad.

Data published by the Department of Commerce showed that investments abroad in enterprises controlled in the U.S. (direct investments) continued to be the primary manner in which lenders invested abroad during the first half of 1950. Preliminary reports placed the outflow of direct-investment capital at about $330 million for this period. In addition, probably $250 million of foreign earnings were reinvested. About $200 million of new foreign loans were offered to investors during the first six months of the year, as usual by borrowers whose credit standings were high. In Jan. 1950 the International Bank for Reconstruction and Development went to the U.S. capital market and sold $100 million of securities, and Canadian provinces and companies borrowed a similar amount. In the aggregate, however, foreigners repaid U.S. lenders slightly more than they borrowed.

Conditions in many parts of the world remained unfavourable for new investments and U.S. investors were cautious about placing funds abroad. Such loans as were made went to preferred borrowers and most of the direct investment capital went into petroleum enterprises, though new investments in other extractive industries, particularly mining, were made.

Early in 1950, the U.S. petroleum industry expressed public concern over the future of its foreign investments. These were valued at approximately $2,400 million at the beginning of 1948 and had earned about $600 million during 1948. The industry feared that steps taken by certain foreign countries to combat a shortage of dollars would result in curtailed markets for foreign-produced oil and in reduced dividend payments to the U.S.

Mining. During 1950 it appeared increasingly likely that mining operations abroad would absorb a large amount of U.S. capital. It was generally known in America that the prospective exhaustion of the rich iron ore deposits in the Great Lakes region would require either the discovery of new high ore content bodies abroad or the use of readily available, but difficult to refine, ores in the U.S. To a certain extent this problem was being met by the investment of large sums of U.S. capital in extensive ore deposits in eastern Canada. However, with the announcement early in the year by the leading U.S. steel company of an ore extraction concession granted to it by the Venezuelan government, the U.S. iron ore supply problem seemed largely settled, given time and a large outlay of capital. Geologists of this company discovered what apparently was the richest iron ore deposit in the world, in the interior of Venezuela. It would probably be several years before the ore began to come to the U.S. in large quantity for smelting and refining.

Other Investment Opportunities. Several underdeveloped countries made efforts during the year to attract U.S. capital, among them Trinidad, Israel and Turkey. In March, the Aid to Pioneer Industries act was passed granting income tax and customs concessions to new enterprises in Trinidad. In 1950 a change in British policy made it possible to liquidate the full investment in colonial territories and to secure dollars for it, except for capital gains. New capital was expected in Trinidad from the U.S. (and other countries) for a wide range of enterprises, including a cotton textile mill, a tourist hotel, a flour mill, a cement factory and knitted goods, baking powder and yeast factories.

The Israeli government invited U.S. oil interests to visit that country for the purpose of establishing a large refinery and to explore the country's oil possibilities. The offer included drilling offshore as well as in the Negev desert and other potential areas. Other enterprises had also been asked to invest in Israel. The Turkish government announced that foreign investors could transfer their Turkish currency profits back to the original currency of investment. Other developments included an invitation to U.S. businessmen to participate in the ten-year, $1,000 million plan for the development of the Belgian Congo. The British government announced that it would sell part of its holdings of shares in African uranium and copper mines to a U.S. group.

Foreign Investments in the United States. The value of foreign investments in the U.S. aggregated approximately $18,816 million on June 30, 1950, about $1,200 million more than at the end of 1949. Preliminary data prepared by the Department of Commerce indicated that a further large rise took place in the third quarter of the year. Changes in other postwar years had been moderate, amounting, in 1949, to a rise of about $500 million.

Increases in the value of these foreign investments largely reflected a pronounced improvement in the international financial position of many foreign countries although, to a lesser extent, rising security prices in the U.S. contributed.

The recovery in foreign balances, which began in 1948 following large-scale aid to European Recovery programme countries and was interrupted during 1949 by the financial crisis in a number of countries, continued beyond the first half of 1950. During the third quarter of the year foreigners increased their banking balances and other short-term claims on the U.S. by roughly $570 million and United States gold sales to foreigners approximated to an additional $700 million.

The change in foreign short-term claims on the U.S. during the first half of the year was somewhat larger for foreign official institutions than for private organizations and individuals. The largest increase, one of about $340 million, was for Britain. Lesser increases were recorded for France, the Netherlands, Switzerland and Germany. Italy and most of the remaining European countries showed declines or only moderate rises in their short-term assets. Latin American countries generally reduced their U.S. banking assets in this period. The reverse was true for the countries of Asia, Japanese assets rising by about $125 million largely as a result of U.S. aid to that country.

During the third quarter of 1950 the increased U.S. short-term liability to foreigners partly reflected a corresponding movement of U.S. to Canada (and probably elsewhere) in the expectation of a rise in the value of foreign currencies in terms of the U.S. dollar. Part of the rise in U.S. liabilities was accounted for by the $225 million stabilization loan to France by 25 U.S. banks which required that, as collateral, the French stabilization fund should deposit with the bankers funds or securities in amounts equal to the drawings on the loan. However, most of the improvement in the dollar and gold position of foreign countries during the quarter was probably directly related to the receipt of U.S. capital and to better economic conditions abroad. The dollar balances of Canada and Latin America rose by about $505 million and $165 million respectively; and though the balances of Britain declined about $165 million. It appeared that the British had utilized these and dollars earned during the quarter to purchase about $580 million of gold from the U.S.

The increase in the value of foreign long-term investments in the U.S. totalled about $600 million during the first half of 1950, about $215 million of this rise reflecting an increase in quoted market prices. About $270 million represented net purchases of securities issued by the U.S. government and the value of foreign-controlled enterprises in the U.S. rose by approximately $120 million. Of the latter figure, approximately $75 million represented the plough-back of earnings of the U.S. companies.

Particularly because of foreign exchange controls, foreign transactions in the stocks and bonds of U.S. securities were limited during the first half of 1950, as in 1949. In earlier years, countries in Europe and Asia had sold substantial amounts of such securities as a means of financing their balance of payments deficits. Since no large-scale liquidations of foreign holdings of U.S. securities had taken place during the critical second and third quarters of 1949 it was generally assumed that certain foreign countries had exhausted their portfolio of dollar securities. However, foreigners did purchase about $270 million of government bonds during the first six months of the year. The value of foreign holdings of U.S. securities increased further in the third quarter, mainly as a result of a 7% rise in share prices. (*See* also BALANCE OF PAYMENTS.) (M. AB.)

IRAN: *see* PERSIA.

IRAQ. Independent Arab kingdom of Mesopotamia, bounded by Syria, Turkey, Persia, the Persian gulf, Saudi Arabia and Jordan, watered by the Tigris and Euphrates. Area: 168,040 sq.mi. Pop.: (1935 est.) 3,560,456; (1947 census) 4,799,500. Language: Arabic 67%, Kurdish 25%, Persian 3%, Turki 2%, other 3%. Religion (approximately): Moslem 91% (Shiah Arabs 45%, Sunni Arabs 15%, Sunni Kurds 25%, Shiah Persians 3%, Sunni Turks 2%, etc.); Christian 5%, falling into three main groups (a) Roman Catholics of Chaldean, Syrian and Armenian rites, the strongest community (*c.* 100,000) being Chaldean, (b) Greek Orthodox and (c) free churches (Syrian Jacobite, Gregorian Armenian, etc.); Jewish 2·5%; others 1·5% (Yezidi, Sabaean, etc.). The Sunni Arabs are the ruling class. Chief towns (pop., est. 1947): Baghdad (cap., 552,000), Mosul (279,400), Basra (206,000), Kirkuk (148,300). Ruler, King Faysal II (born May 2, 1935); regent, Prince Abdulilah; prime ministers in 1950: Ali Jawdat al Ayyubi (until Feb. 1), Tawfik al Suweidi and (from Sept. 16) Nuri Pasha as Sa'id.

History. During the year 1950 there were three cabinets. The first, under Ali Jawdat al Ayyubi (Dec. 10, 1949-Feb. 1) and the second, under Tawfik al Suwaidi (Feb. 6-Sept. 4) were coalitions. The third, formed on Sept. 16, was presided over by the veteran statesman Nuri Pasha as Sa'id, the leader of the Constitutional Union party, who had held office during most of 1949. In November Nuri delivered a speech in Baghdad in which he dealt with the defence of Iraq. He gave it as his opinion that in the event of another world war Iraq would find it impossible to remain neutral in the conditions then obtaining in the middle east. He then went on to announce that his government proposed without delay to set up a defence council for the country.

In February the chief of police was arrested for "insubordination." In April he was sentenced to life imprisonment for attempting to overthrow the government by force.

The regent visited London in August and in the autumn accompanied the queen mother to Medina which she visited privately on pilgrimage. In November King Abdullah of Jordan paid a short visit to Baghdad.

Relations with Israel remained unchanged during the year. The supply of oil through the Kirkuk-Haifa pipeline was still cut by the Iraq government; but in March a law was passed permitting Iraqi Jews to renounce their nationality and to leave the country, and in May a regular airlift of Jews emigrating to Israel began.

At the time of the crisis in the Arab league over Jordan's annexation of Arab Palestine in May, the Iraqi government refused to associate itself with the first Egyptian proposal to expel Jordan from the league. It also abstained in June for "technical reasons" from participation in the Arab states' collective security pact.

The negotiations initiated by the government for the revision of the terms of the Iraq Petroleum company's oil concessions in Iraq led in June to agreement on the following main points: (1) the scale of royalties was to be increased from 4*s.* to 6*s.* a ton of oil produced; (2) payment would be in gold. There were other oil developments of importance. Following on the duplication with 16-in. pipes of the old Kirkuk-Tripoli pipeline, a refinery was opened at Tripoli on Jan. 1, 1950. In May plans were adopted for a pipeline from Kirkuk to the Mediterranean port of Banyas in the Lebanon.

In January a loan (secured on oil royalties) was obtained from the International Bank for Reconstruction and Development to enable the completion of the Wadi Tharthar scheme for the control of Tigris flooding, and in May the government formed the Iraqi Development board to supervise the work. The total amount involved in the project was $12·8 million. In May Baghdad was seriously threatened by widespread flooding from the Tigris.

A second loan (£3 million) was negotiated in May with the British government for the completion of railway projects—in particular the rebuilding of Baghdad station and the construction of a link railway bridge across the Tigris. In September a financial agreement was negotiated with the British government which undertook to release to Iraq in convertible sterling a sum not exceeding the equivalent of $20 million for the period from Oct. 1949 to Sept. 1950. It was agreed that the description "hard currency countries" should include Belgium, Japan and Western Germany; and that the uncommitted balance in this period could be carried forward.

In January the government announced that they preferred to remain outside the sphere of the Clapp commission's activities as it had been appointed through the U.N. Conciliation Commission for Palestine, with which Iraq was not negotiating directly. But in June the government introduced a 5% tax on exports to encourage production for local needs and in July an import ban was declared on a large selection of goods which could be produced by local industry.

(O. Tw.)

Education. Schools (1948-49): elementary 1,050, pupils 150,588; intermediate and secondary 175, pupils 26,748, teachers 1,352; vocational 9, pupils 1,000, teachers 73. Institutions of higher education 10, students 4,500, lecturers 106.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): barley 570 (760); wheat 300 (490); rice 350 (230); dates 259 (170); tobacco 4 (6); cotton 1 (1). Livestock ('000 head, 1948-49): sheep 7,055; goats 1,849; cattle 822; buffaloes 130; camels 291; horses 188; mules 52; donkeys 413.

Industry. Industrial establishments (1948) 1,762; persons employed 27,246. Crude oil production ('000 metric tons, 1949; 1950, six months, in brackets) 4,200 (2,900).

Foreign Trade. (Million dinars, 1949) imports 40·6; exports, excluding oil, 12·7; including oil 26·2. Main sources of imports (1948): United Kingdom 43·5%; United States 7·8%; Italy 6·4%. Main destinations of domestic exports (1948): India 19·2%; United Kingdom 17·1%; United States 13·4%. Main imports (1949): textiles 18·0%; tea and sugar 12·6%; iron and steel 12·1%; boilers 11·1%. Main exports, excluding oil (1949): cereals 45·5%; dates 22·4%; wool 3·7%.

Transport and Communications. Roads (1949): 4,500 mi. Licensed motor vehicles (Dec. 1949): cars 7,000; commercial 8,500. Railways (July, 1949): 1,027 mi.; passenger-mi. (1947-48) 329 million; freight ton-mi. (1947-48) 367 million. Air transport (1949): passenger-mi. 5,533,000; cargo net ton-mi. 116,000. Telephones (March 1949): 14,595. Radio receiving sets (1949): 6,600.

Finance and Banking. (Million dinars) budget (1949-50 est.; 1950-51 in brackets): revenue 25 (24); expenditure 27·1 (24·1). Currency circulation (June 1949; June 1950 in brackets): 35·5 (39·3). Bank deposits (Aug. 1949; Aug. 1950 in brackets): 12·0 (12·5). Monetary unit: Iraqi *dinar* at par with the pound and with an exchange rate 0·357 dinars to the U.S. dollar.

IRELAND, NORTHERN: *see* NORTHERN IRELAND.

IRELAND, REPUBLIC OF. Independent republic on an island W. of Great Britain. Area: 26,601 sq.mi. Pop.: (1946

census) 2,953,452; (mid-1949 est.) 3,023,000. Language: English *c.* 76%, Erse (Gaelic) *c.* 24%. Religion (1936 census): Roman Catholic 93·4%, Episcopal 4·9%, Presbyterian 1%, Methodist 0·3%, Jewish 0·1%, other 0·3%. Chief towns (1946 census): Dublin (cap., 506,635); Cork (75,361); Dun Laoghaire (44,689); Limerick (42,987); Waterford (28,332). President, Seán Thomas O'Kelly; prime minister, John A. Costello.

History. The year 1950 found the republic in a mood of increasing political realism. The more irresponsible outcries against partition were gradually deflated and Irish unity was increasingly seen as something to be approached both gradually and realistically. It was a good sign of the times that the 26 counties (republic of Ireland) and the six counties (Northern Ireland) co-operated in the matter of the Erne Drainage bill, a measure that in practice leads simultaneously to the drainage of land in Co. Fermanagh (Northern Ireland) and the distribution of light and power in hitherto electricity-starved districts of Co. Donegal (republic of Ireland). Moreover, a single general manager was appointed for that portion of the Great Northern railway that lies in the six counties and for the entire railway network of the 26. The first fruits of this co-ordination were luxurious express trains between Cork and Belfast, with only one main halt, at Dublin. The wits of the capital pretended to see in this a gradual drawing together of the hard-headed business men of Cork and Belfast and a gradual by-passing of the new Irish Vienna on the Liffey. But the fact remained that engineers and railwaymen had forestalled the politicians in pointing the way towards, at least, a kind of functional co-operation of the whole island.

These improved travel facilities were, however, achieved against a background of persistent financial loss by Coras Iompair Eireann, the new transport board which had been responsible to the government alone from June 1, 1950. A contributing factor was a reduction in the number of foreign tourists. In 1949 tourist traffic was worth £28 million; receipts for 1950 would almost certainly be smaller. Twice as many Americans came to Ireland, largely on their way to Rome, but as a result of devaluation (the Irish pound being officially pegged to the British), it was questionable whether they left much more money behind them than the year before; and the number of British visitors was decidedly less. With most European countries outside the iron curtain again open to British tourists that was only to be expected, but leading Irish hoteliers rose to the occasion and faced the fact that with the tourist honeymoon on the wane the future of their industry depended on giving visitors, especially American visitors, the kind of accommodation they wanted.

In trade as a whole the republic showed an adverse visible balance for the first nine months of 1950 of £65 million against £52 million in the same period in 1949. There was a tremendous increase in exports of bacon and ham and a notable increase in cattle and textiles. Other interesting items in the export list were the first large consignment of frozen beef to the U.S.; medical supplies to Egypt, Pakistan, Persia, and South Africa; leather to the U.S.; live lobsters by air to Brussels; razor blades to Australia and many other countries; marmalade to New York; and textiles to Canada.

In face of devaluation, and allowing for invisible exports (including the valuable income from tourists), the trade figures were encouraging. The credit of the state was high, the national debt comparatively low; and Irish government securities (including a new issue of £15 million 3½% exchequer bonds) were increasingly supported by Irish investors. It looked as if increasing investment at home rather than the suggested repatriation of the very considerable Irish capital invested in Britain was for the moment the answer to the government's ambitious programme of agricultural and industrial development, afforestation, housing, building of new hospitals, electricity, telephones and other works.

An economic difficulty was here, as elsewhere, the rising cost of living; and industrial peace which, largely thanks to the Labour court, had remained almost unbroken since 1948 was again endangered. The government proposed a new cost-of-living index based on a census of family budgets but this would take time to prepare, and it was not clear whether the trade unions would hold their hand. Otherwise, the government seemed in no immediate danger for at least the remaining two years of its term of office; and speculation on the effect of four years of inter-party government led some observers to the conclusion that the republic might never return to party politics in the form in which they had existed since the Anglo-Irish treaty. What was certain was that there was much public apathy about party politics in the year 1950.

Tremendous public interest was aroused by a legal issue in which a Protestant father and a Roman Catholic mother disputed the custody of their children. The ruling, in which the Supreme Court upheld the finding of the High Court, was contrary to common law as hitherto administered and was based on certain clauses in the constitution of 1937. The decision created uneasiness in Protestant circles, which feared the substitution of canon for civil law.

Other highlights were the raising of the status of the Irish high commissioner in London to that of ambassador (the new ambassador was F. H. Boland, formerly an official of the Department of External Affairs) and the meeting of the Inter-Parliamentary union with delegates from 33 nations in Dublin. The Minister for External Affairs, Seán MacBride, continued to play an active part in the affairs of the Organization for European Economic Co-operation and the Council of Europe. The Irish News agency, set up by act of parliament as a statutory company, started in July to collect and distribute news in Ireland and abroad. Offices were opened in London and others were being opened in New York. What might be called the external political activities of the year 1950 could be summarized as the extension into many fields of principles inherent in the previous year's formal declaration of the republic of Ireland and, in spite of complications arising from partition, an evidence of the republic's desire to play her part as a European nation.

In spite of one of the worst summers in living memory, a surprising amount of the harvest was saved. But the saving of it showed that the agricultural industry was dangerously undermanned and the drift to the towns, particularly to Dublin, still one of two basic Irish problems; the other was emigration to Britain. Nevertheless, with the income of the farming community trebled since 1938 and industrial production up by 40% in the same period, the outlook could not be described as gloomy. Tens of thousands of Irish men and women made the Holy Year pilgrimage to Rome.

At home, in literature and the theatre, there was nothing that could be honestly described as outstanding; though the republic ended the year possessed of four purely literary journals, the *Dublin Magazine*, the *Bell*, *Envoy* and *Irish Writing*, which was at least evidence of a searching of the spirit. But though these journals were edited and printed in the republic of Ireland they depended and would continue to depend upon subscriptions from Britain and America. What was to follow the Irish literary renaissance of the beginning of the century was in 1950 still unsure, but if Irish literature in English was still in the doldrums, the visual arts flourished: Jack B. Yeats and a growing school of younger Irish painters upheld the age-old tradition of Irish culture at home and abroad. (D. I.)

Education. Schools (1948-49): elementary 4,922, pupils 446,082, teachers 12,612; secondary 408, pupils 45,406; universities 2 (the National university has 3 constituent colleges), students 7,221, professors and lecturers 495.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets):

wheat 367 (360); oats 568; barley 162; rye 4 (4); potatoes 2,735; sugar, raw value 90. Livestock ('000 head, June 1949): cattle 4,127; sheep 2,182; pigs 675; horses 402; mules 5; chickens 18,524; turkeys 1,159; geese 750; ducks 1,062. Wool production ('000 metric tons, greasy basis, 1948; 1949 in brackets) 7 (7). Food production ('000 metric tons, 1948; 1949 in brackets): meat 135 (125), of which (1948) beef and veal 70, pork 48; milk 2,101 (2,158); butter (co-operative creameries only, 1949) 35; cheese (1949) 3·4. Fisheries: total catch (metric tons, 1948; 1949 in brackets): 25,900 (18,200).

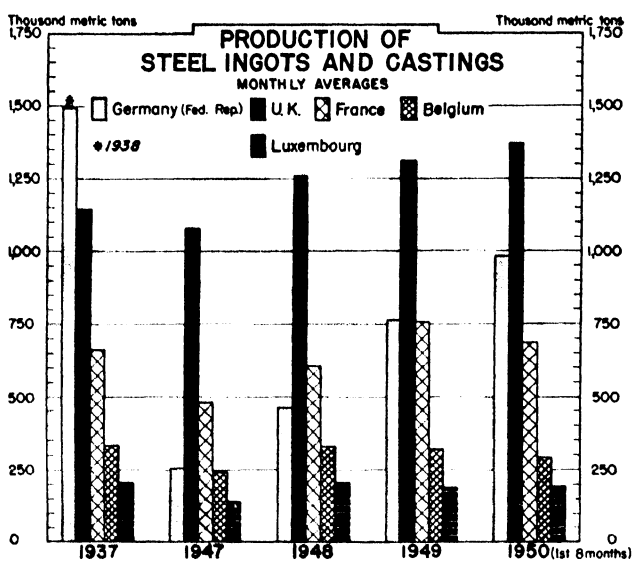
Industry. Persons employed in industrial establishments (1948) 197,550. Fuel and power (1949; 1950, six months, in brackets): coal consumption ('000 metric tons) 115 (83); manufactured gas (million cu. metres) 146 (77); electricity (million kwh.) 757 (431); peat ('000 metric tons, 1948) 3,631. Total new houses built under state-aid (1949; 1950, six months, in brackets) 6,456 (5,801). Index of industrial production (1937=100, 1949; 1950, three months, in brackets): 139 (146).

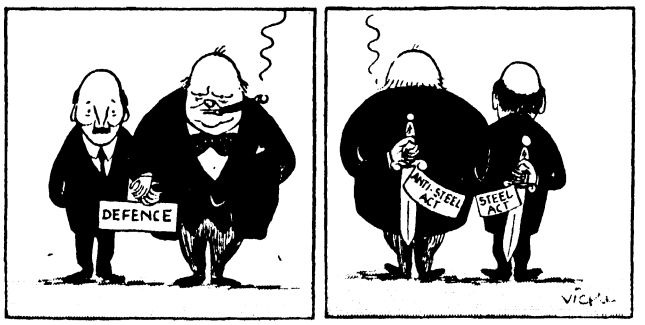
Foreign Trade. (£ million, 1949; 1950, six months, in brackets) import 129·8 (77·4); export 60·5 (30·2). Main sources of imports (1949): Great Britain 55·3%; U.S. 14·3%; Netherlands 2·4%. Main destinations of domestic exports: Great Britain 77·1%; Northern Ireland 13·9%; Netherlands 2·3%. Main imports: textiles (excluding apparel) 13·5%; machinery, electrical goods and apparatus 9·0%; non-metalliferous mine and quarry products 8·7%; cereals and feedingstuffs 7·9%. Main domestic exports: live animals 46·0%; foodstuffs of animal origin 22·7%; drink 8·5%.

Transport and Communications. Roads (1949): 49,071 mi. Licensed motor vehicles (Dec. 1949): cars 71,911; commercial 37,085. Railways (1949): 2,463 mi.; freight net ton-mi. 313 million; freight carried ('000 tons) 4,536. Air transport (Aer Lingus, 1948-49): mi. flown 2,564,792; passengers carried 170,501; cargo (metric tons) 1,299; mail (metric tons) 91. Telephone subscribers (Sept. 1949): 42,337. Wireless licences (1949): 279,275.

Finance and Banking. (£ million) budget: (1949-50) revenue 74·0, expenditure 76·7; (1950-51 est.) balanced at 75·7. National debt (March 1948; March 1949 in brackets): 82·9 (113·0). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 51·8 (54·5). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 184 (213). Bank deposits (quarterly average, April-June 1949; April-June 1950 in brackets): 242·2 (247·0). Monetary unit: Irish *pound* at par with the pound sterling and with an exchange rate of £1 = $2·80.

IRON AND STEEL. For the iron and steel industries of western Europe 1950 opened on a note of economic apprehension and closed on one of military alarm while the industries of the two biggest producing countries, the United Kingdom and Western Germany, ended the year as they had begun it, expecting a structural change. The economic apprehension was caused by mounting evidence of the imminent saturation of markets available to the industry's products, when postwar reconstruction was only beginning to have its effect on increasing production. These fears were summarized in the Economic Commission for Europe's report *European Steel Trends in the Setting of the World Market* (known as the Rollman report) published on Jan.5. The report concluded that by 1953 crude steel production in





"United Front" by Vicky which was published in the "News Chronicle" (London) on Sept. 18, 1950.

Europe, allowing for a German output of 11·1 million tons and excluding U.S.S.R. but including the United Kingdom, would reach 70·3 million tons. This was later revised to 60·5 million tons. It was deduced that there would then be an unmarketable surplus of 8 million tons.

The long-term consequences of this report took shape in the Schuman proposals later in the year. The short-term effect was no more than to focus attention on the gloomy prospect and to provoke in the industries of the different nations concerned a sharply defensive reaction to any criticism of their own plans. A widely voiced criticism of the report was that it did not consider with sufficient boldness the possibilities of stimulating peaceful consumption of iron and steel, both in Europe and in backward areas.

The tendencies which gave cause for alarm persisted during the early part of 1950. Belgian export prices, always a barometer, were dropping steadily, and in January averaged 1,000 Belgian francs a ton less than they had in the previous month. The French were subsidizing exports by a levy and even so were reporting an output of rolled products in excess of orders received. German steel output during January was the highest since World War II (893,000 tons), but there, too, reports of a shortage of orders in the steel plants and fabricating shops were common. The British steel industry's production drive was growing and the Organization for European Economic Co-operation was informed of an estimated production during 1950 of 16·3 million tons with an increased margin for export. Other evidence of the end of the sellers' market in the United Kingdom came from the increasing call for the abolition of the allocation scheme except for sheets and tinplates of which there was still a shortage. *The Times* reported on Jan. 7 that the scheme was "already a dead letter to some extent" and it fell quietly out of the industrial picture until it was abolished in May.

The stage seemed to be set for a grim battle for export markets, intensified by the fact that much of the modern plant coming into production had to maintain a high output for economic operation. But the struggle did not, in fact, develop beyond a skirmish. Average total monthly production in the nine principal steel producing countries of western Europe was 3·8 million to 3·9 million tons for 1950 compared with 3·2 million and 3·8 million tons in 1948 and 1949 respectively. This, moreover, was in spite of low French production during March and April because of strikes.

The acceleration of western rearmament before and during the Korean war had transformed the situation. European steel was called for in huge quantities to replace U.S. steel diverted to arms. Western German exports of semi-steels and hot rolled products increased from 288,000 tons in the first quarter (9,500 to the U.S.) to 382,000 (17,300) in the second, 449,000 (62,000) in the third and an estimated 430,000 (100,000) in the last. French exports by the end of July had beaten by 100% the figure for the corresponding seven months of 1949, and by the end of September the French government had found it necessary to reimpose



A workshop of the great Krupp works at Essen, Germany. In 1950 it was announced that further demolitions in the British zone would cease.

export control to safeguard its own security programme. This gave a stimulus to the Belgian industry whose recovery in the export field had been retarded by strikes at the Antwerp docks. The U.S. also cleared the field by imposing export control on 39 classes of iron and steel goods on Sept. 30. By November, Belgian export prices had risen by nearly 2,000 Belgian francs a ton to about the 1949 average level.

So 1950 ended with military demands and full order books. The chief question posed by the E.C.E. report with which the year opened remained unanswered. There were other unanswered questions facing 1951, some of them concerning raw material supplies (iron ore, scrap and fuel). The most serious concerned metallurgical coke and coking coal, particularly for France. French imports of 700,000 tons of coke from the Ruhr in the fourth quarter of 1950 were 20% below requirements and though agreement had been reached for the supply of 3 million tons of coke during 1951, the year's requirements were estimated at 4 million tons plus a million tons of coking fines. The German industry itself, however, was already feeling the shortage of coke in October when its supplies were cut by 13% so that the prospect of increasing supplies to France from its natural source seemed poor. This caused both the Germans and the French to redouble their efforts to find means of using non-coking coals, in which work the O.E.E.C. co-operated. Promise was shown in one line of investigation particularly: at an experimental low-shaft blast furnace in Germany the charge was not the normal ore, coke and limestone, but briquettes made from a mixture of non-coking coal, fine ore and flux. The iron and slag produced were reported to be normal, and the gas of a higher quality than normal blast-furnace gas. It was seen that if the process proved both technically and economically successful the need for coke ovens and special coking coal might in time almost disappear.

In the United Kingdom the beginning of the year found the industry awaiting the electorate's verdict on the decision to nationalize the greater part of it. In Nov. 1949 the opposition had welcomed the government's decision to defer the earliest date for appointments to the Iron and Steel corporation (which was to be the controlling body) until Oct. 1, 1950, a date that would be after the general election that was held in February.

In two further debates in the House of Commons after the election the Opposition affirmed its intention of "unscrambling" the industry, should another election lead to the return of a Conservative majority. The composition of

TABLE I. WORLD PRODUCTION OF IRON ORE
(In thousands of short tons)

	1945	1946	1947	1948	1949	1950*
United States	98,982	79,344	104,263	113,124	95,130	119,200
Canada	1,135	1,581	1,919	1,337	3,830	3,480
Newfoundland	1,103	1,393	1,617	1,644		
Brazil	789	1,102	1,022	1,589	?	?
Chile	1,042	1,491	1,772	2,806	2,863	3,050
Austria	357	520	976	1,320	1,640	1,920
Czechoslovakia	304	1,230	1,502	1,575	1,550?	?
France	8,502	17,893	20,634	25,363	34,639	31,900
Germany	?	4,564	4,920	8,021	10,044	11,600
Great Britain	15,902	13,634	12,422	14,660	15,014	14,300
Luxembourg	1,550	2,477	2,196	3,749	4,561	4,130
Spain*	1,291	1,760	1,669	1,798	1,996	2,300
Sweden	4,332	7,570	9,805	14,647	15,500	14,400
U.S.S.R.	20,000?	23,000?	26,000?	?	?	?
India	2,536	2,697	2,798	2,559	?	?
Japan	1,495	624	550	612	859	890
Korea	933	83	103	?	9	?
Algeria	1,326	1,842	1,715	2,065	2,798	2,270
Morocco, Spanish	843	868	958	997	1,040	?
Sierra Leone	926	817	741	1,067	?	?
Union of South Africa	855	1,044	1,281	1,283	1,375	1,130
Australia	1,750	2,046	2,414	?	2,400?	?
World total	179,000	169,000	205,000	238,000	240,000	?

* Incomplete data; figures show annual rate maintained during the months for which data were available.

TABLE II. WORLD PRODUCTION OF PIG IRON
(In thousands of short tons)

	1945	1946	1947	1948	1949	1950*
Australia	1,257	979	1,268	1,384	1,166	1,420
Austria	107	64	307	676	923	940
Belgium	810	2,382	3,105	4,340	4,126	3,770
Canada	1,956	1,521	2,120	2,372	2,366	2,430
Czechoslovakia	635	1,058	1,569	1,822	2,067	?
France	1,320	3,852	5,393	7,230	9,210	7,320
Saar	?	272	720	1,250	1,743	1,720
Germany	1,238	2,568	2,769	6,206	8,443	10,100
Great Britain	7,960	8,692	8,457	10,389	10,640	9,650
India	1,570	1,632	1,728	1,647	1,760	1,525
Japan	1,085	233	405	922	1,766	2,200
Luxembourg	349	1,504	2,004	2,896	2,614	2,970
Poland	252	800	956	1,249	?	?
U.S.S.R.	9,600?	11,000?	12,500?	14,000?	16,500?	?
United States	54,956	46,323	60,141	61,966	48,673	65,300
World total	87,000	87,000	111,000	124,500	127,000	?

* Incomplete data; figures show annual rate maintained during the months for which data were available.

TABLE III. WORLD PRODUCTION OF STEEL
(In thousands of short tons)

	1945	1946	1947	1948	1949	1950*
Australia	1,565	1,228	1,511	1,296	1,310	1,550
Belgium	826	2,532	3,177	4,292	4,209	3,840
Canada	2,878	2,327	2,946	3,200	3,187	3,390
Czechoslovakia	1,045	1,839	2,520	2,921	3,200	?
France	1,831	4,859	6,139	7,984	9,930	9,100
Saar	?	321	780	1,354	1,937	1,730
Germany	322	3,128	4,151	6,129	10,093	12,000
Great Britain	13,243	14,218	14,251	16,662	15,418	18,400
India	1,515	1,457	1,412	1,350	1,393	1,580
Italy	435	1,271	1,864	2,342	2,266	2,480
Japan	2,295	621	1,037	1,889	3,430	5,000
Luxembourg	285	1,428	1,890	2,704	2,504	2,380
Poland	546	1,344	1,741	2,154	2,532	2,700
Sweden	1,326	1,325	1,313	1,386	1,506	1,550
U.S.S.R.	13,200?	14,300?	15,400?	20,200?	23,800?	?
United States	79,702	66,603	84,894	88,640	77,978	96,380
World total	124,000	122,100	149,600	169,400	173,000	?

* Incomplete data; figures show annual rate maintained during the months for which data were available.

the board of the corporation was announced in September. Under the chairmanship of S. J. L. Hardie, a prominent industrialist hitherto concerned mainly with the manufacture of oxygen and the provision of steel scrap, no figure prominent in the steel industry was included; the Iron and Steel federation had refused to put forward nominees for selection. Feb. 15, 1951, was announced, in October, as the vesting date when the scheduled 92 companies were to pass under public ownership while retaining their identities and management. Meanwhile the industry continued its high production record and in what would be its last full year under private ownership produced the record volume of 6·3 million tons of crude steel. The promise of even higher outputs in future years was given by the blowing in during October of the first blast furnace at the huge new integrated plant at Margam, South Wales, where the full production rate of a million tons of steel a year was expected to be achieved during 1951. In the technical field, too, much had been achieved, not least being the co-operative development through the British Iron and Steel Research association of a new, simplified design of open-hearth steel-making furnace. Some 20 of these had been installed by the end of the year, with reported production increases in some cases of up to 20%.

In Western Germany the limitation on output of 11·1 million tons was raised on Sept. 14, in an announcement made after the three-power conference in New York. Steel was "to be produced outside the present limitation where this will facilitate the defence effort of the west." On Nov. 27 it was announced in Frankfurt that the fourth quarter's production quota might be exceeded by 300,000 tons for exports to aid western defence. This corresponded closely enough with the federal government's estimate of a total production of 3·1 million tons, 330,000 tons over the quota. This was the culmination of a long German campaign for relaxation of the limitation.

The structure of the German steel industry itself was still undetermined at the year's end. On May 17 the law governing the ownership and de-cartelization of the industry was re-cast and extended to the French as well as the British and American occupation zones. The International Ruhr authority was left with its task of allocating and supervising distribution of the Ruhr coal, coke and steel and the eventual right to determine ownership of the German steel industry was again left to a "freely elected German government" despite French hesitation at the possibility of a nationalized German steel industry leading to a dangerously large concentration of industrial power. Meanwhile de-cartelization and trusteeship measure scontinued. The draft proposals to be put by the federal government and the steel trustees to the high commission had not been published by the end of the year.

Commonwealth. Less subject than western Europe to the economic pressures described in the Rollman report, the main iron and steel producers of the Commonwealth maintained a high rate of production throughout 1950 and carried on with the development plans already in hand. The increased demand during the second half of the year made it necessary for both Canada and the Union of South Africa to control steel consumption, even though production in the former country exceeded, at about 3·3 million tons, the previous year by half a million tons.

Australia. Early in the year a new rod and strip mill went into production at Port Kembla, taking this centre a further stage towards its planned supersession of Newcastle as Australia's chief steel producing centre in 1952. The new continuous wide-strip mill would not, however, be in action until 1954.

Canada. In July at Welland, Ontario, the first rolling mill for stainless steel sheets in Canada went into production. But imports of alloy and special steels were still demanded from the United Kingdom in quantities far in excess of what it was possible for Britain to supply.

South Africa. At Vanderbijl Park the new coke ovens were the only item to come into production soon enough to affect the 1950 figures, but towards the end of the year the other new plant was beginning to come into action. The two new blast furnaces of 800-850 tons a day capacity and the open-hearth steel plant with a 350,000 tons a year capacity were expected to be in full operation by May 1951, with provision for subsequent expansion to a capacity of a million ingot tons if required. (M. Ds.)

United States. The sharp drop in iron ore production in 1949 was largely due to strikes in the steel and coal industries. Production was more normal in 1950, the total for the first 10 months being 99,344,553 short tons. After having been heavily reduced by strikes in 1949, blast furnace production came back to more normal levels in 1950, the total from Jan. to Oct. being 54,404,297 tons, of which 53,850,996 tons was pig iron and 553,301 tons ferro-alloys. The low returns for steel production in the earlier part of 1949, due to the strikes, were nearly overtaken by the end of the year, but production did not reach its full stride until the beginning of the second quarter of 1950. After that, production averaged nearly 100% of capacity, and totalled 88,348,655 tons from January to November. (*See* also METALLURGY.) (G. A. Ro.)

ISLAM. During 1950 the most important event in the life of the Islamic world was the recognition of the independence of Indonesia and its admission to the United Nations, bracketing it in importance with Pakistan from the point of view of the figure of its population of about 70 million. Not only did this event reinforce the Islamic world politically but also Indonesia promised to become an important centre of Moslem culture. But from this point of view the country faced an enormous task: it must be remembered that Dutch colonialism left the population a legacy of illiteracy to the extent of 90%. To combat it Indonesia adopted a programme through which 2 million of illiterates would be taught every year, thus ending illiteracy within 20 years. A people's university was opened at Samarang (Central Java). The number of students in the high schools rose from 600 in 1939 to 9,000 in 1950. A second university was also inaugurated in Jokjakarta, as well as the Academy of Commerce at Jakarta.

Despite the political difficulties that Pakistan was obliged to face and which forced it to devote a considerable part of its budget to armaments, it achieved further important progress in the domain of culture. Steps were taken by the government to found the Federal university in Karachi, the Sind university being transferred to Hyderabad, Sind, while another university, called the Khyber university, was inaugurated on Oct. 1 at Peshawar. Active preparations were put in hand to translate European books into Urdu. In Aug. 1950

took place at Hyderabad a cultural conference which stated that the cultural unity of Moslem countries could be best cemented through the instituting of Arabic as the *lingua franca* of Pakistan and other Moslem countries.

Turkey was the first Moslem country to have achieved the democratization of its political institutions, and this was accompanied by the further revival of religious teachings. The Turkish parliament abrogated the law about the sounding of the *azan*—the call to prayers—in Arabic. An increase in the number of Turkish pilgrims to Mecca and of Turkish students at el Azhar university in Cairo was noticeable.

The celebration of the 50th anniversary of the reign of King Ibn Saud was an appropriate occasion for summarizing the results achieved by his leadership. The perfect organization of the pilgrimage to the Holy Places of Islam, the extension of the ways and means of communication and the building of many hospitals and establishments of learning were among the notable features of his reign.

The arrival to power of the Wafd accelerated considerably the cultural progress of Egypt. This was largely due to its minister of education Taha Husein Bey. Free education in secondary and technical schools was introduced and the struggle against illiteracy intensified. There were 500,000 adult persons frequenting the classes founded for that purpose. Two new universities were opened: the Ibrahim university in Cairo and the Mohammed Ali university in Assiut, Upper Egypt. The Mohammed Ali chair was inaugurated at the Centre Universitaire Mediterranéen at Nice, France. In 1950, 15,000 students were undergoing educational and technical courses in Europe and the U.S. In the social domain the results were no less important. The Egyptian feminist movement "Bint al-Nil" (the Daughter of the Nile) showed further progress under the leadership of Mme. Durriya Shafiq, the aim of which consisted in allowing the women of Egypt to play their part in accordance with the principles of Moslem religion. El Azhar did not stay aloof from this modernization: it sent some students to Europe whence they would later go to teach the religion of Islam to the English-speaking countries. The new rector of el Azhar university, Sheikh 'Abdul Majid Selim, introduced the teaching of foreign languages into the curricula. During Aug. 22-31 the 2nd Arab Cultural congress was held in Alexandria, at which a series of resolutions were adopted to make the curriculum of education uniform in Arab countries.

Persia did not stay behind the other Moslem countries. To two existing universities at Tehran and Tabriz were added one at Shiraz and another at Meshed. In Tehran the construction of the Students' City had made headway. In 1950 there were 4,447 primary and secondary schools and teachers' training colleges with a total number of 548,263 pupils. On Oct. 2 was held at Tehran the second Islamic International Economic congress in which all the Moslem countries took part.

In September was held in Tunis a convention of Moslem students from north Africa at which it was decided to ask the French authorities that the diplomas of the Moslem universities of Kairouan and al-Zeitouna should have the same status as those of the French high schools.

Islam also made efforts to look beyond its frontiers, especially in the Americas. In Washington, Los Angeles, São Paulo and Buenos Aires sites were bought for building mosques. In Malaya, at the invitation of Ibrahim bin 'Umar al-Sakkaf (Singapore) a conference of 77 Malayan Moslems from various parts of Malaya was held on Sept. 1 at Kuala Lumpur to found an Islamic college there. In Yugoslavia a law of Sept. 27 abolished the veiling of women. (A. MJD.)

See H. A. R. Gibb and Harold Bowen, *Islamic Society and the West*, vol. 1 (London, 1950); Maurice Gaudefroy-Demombynes, *Muslim Institutions* (trs., London, 1950).

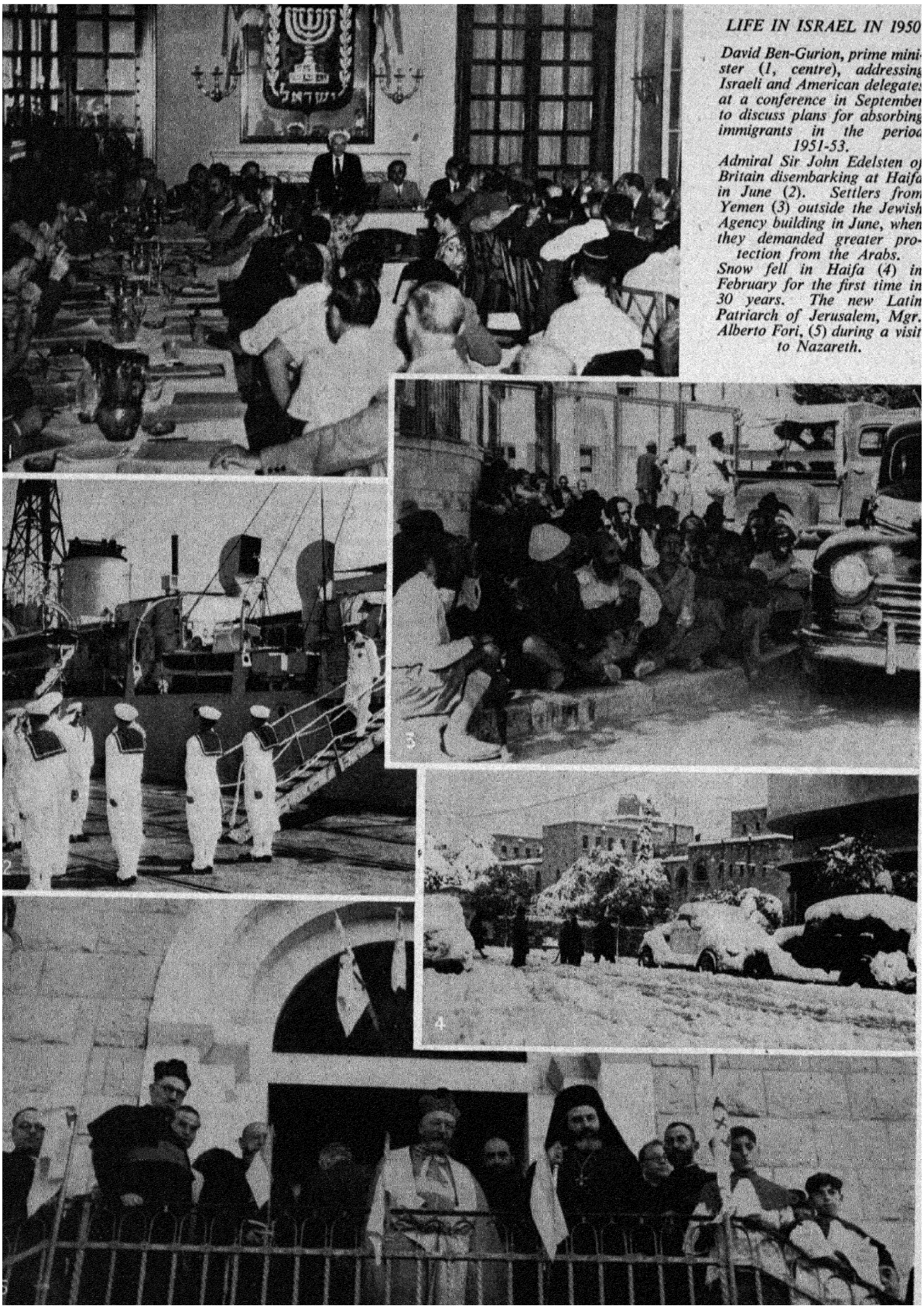
ISLE OF MAN: *see* MAN, ISLE OF.

ISRAEL. Jewish republic in Palestine, with undefined frontiers, proclaimed on May 14, 1948, at Tel Aviv. According to a partition plan adopted on Nov. 29, 1947, by the general assembly of the United Nations, the state of Israel was to cover 5,579 sq.mi. (with Negev); after armistices concluded with all the neighbours during 1949 the *de facto* area of Israel was estimated at about 7,800 sq.mi. According to a census of Nov. 8, 1948, this area had a population of 782,000, including 713,000 Jews; one year later the million mark was reached; by June 1950 the population was estimated at 1,247,000 including 1,094,000 Jews. Chief towns (pop., Dec. 1949 est.): Jaffa-Tel Aviv (over 300,000); Haifa (150,000). President of the republic, Chaim Weizmann; prime minister, David Ben-Gurion.

History. The last days of 1949 and the beginning of 1950 were dominated by the excitement caused by the decision of the United Nations general assembly on Dec. 9 to establish an international regime for the city of Jerusalem (*q.v.*) and its environs. The immediate reaction of the government of Israel was to transfer the parliament (Knesset) to Jerusalem together with the majority of the government offices, and on Jan. 23 a resolution was adopted proclaiming Jerusalem as the capital of Israel. In the succeeding months it became clear that the U.N. decision would not be implemented and it remained a dead letter. Throughout the year progress was made in many directions, but as the months went by the growing economic problems besetting the country became more apparent and imposed increasing hardships on the population.

The economic difficulties were principally due to the growth of the adverse balance of international trade. An indication of the seriousness of the situation might be gauged from the fact that during Jan.-Aug. 1950 imports were valued at around £I 68 million, while exports accounted for only about £I 9 million, the difference having somehow to be found from gifts, loans and remittances from abroad. The government's measures for dealing with the problem rested upon two basic policies. Internally, they accepted the British system of a strictly controlled economy entailing stringent rationing and close supervision of imports and foreign currency transactions. The cost of living index in September was 324 compared with 100 in 1939 and 336 in May 1948. Externally, they took vigorous action to obtain massive financial support from abroad. Recognizing, however, that the ordinary means of raising funds, through the United Jewish appeal, the various affiliates of the World Zionist organization and other semi-charitable institutions were insufficient for the enormous task which lay before them, the government adopted the bold step of summoning an economic conference in Jerusalem from Sept. 3-7, attended by leading Jews from the U.S., Great Britain and South Africa. The most far-reaching proposal accepted by the conference and put forward by David Ben-Gurion, the prime minister, was that a sum of $1,500 million should be raised during the next three years in order to finance immigration and development. One third of this sum would be raised in Israel and the remainder abroad, principally in the United States. It was envisaged that the money should come mainly from loans and investments. This programme was subsequently endorsed by the National Planning Conference for Israel and Jewish Rehabilitation which was held in Washington at the end of October and was attended by virtually every section of American Jewry.

The economic difficulties were also largely responsible for the country's first serious cabinet crisis, which resulted in the fall of Ben-Gurion's government on Oct. 18. The immediate cause was the prime minister's desire to make a change in the



LIFE IN ISRAEL IN 1950

David Ben-Gurion, prime minister (1, centre), addressing Israeli and American delegates at a conference in September to discuss plans for absorbing immigrants in the period 1951-53.

Admiral Sir John Edelsten of Britain disembarking at Haifa in June (2). Settlers from Yemen (3) outside the Jewish Agency building in June, when they demanded greater protection from the Arabs.

Snow fell in Haifa (4) in February for the first time in 30 years. The new Latin Patriarch of Jerusalem, Mgr. Alberto Fori, (5) during a visit to Nazareth.

post of minister of supply, a cabinet seat which was claimed by the Religious bloc. The underlying differences, however, were the unpopularity of the government's austerity programme and the desire of the orthodox leaders (expressed by the Religious bloc) to exercise a greater influence in the every-day life of the country. The end of the crisis, which lasted 17 days, owed much to pressure from U.S. Jewry which was at that moment making a strenuous effort, at the Washington conference, to put the country economically on its feet. The consequence was the formation of Ben-Gurion's second administration, which, very little different from his first, took office on Nov. 1. All the parties comprising the government gave an undertaking that they would support the coalition until Jan. 1953, when the first Knesset's normal life was due to expire. On Dec. 26 the U.S. Export-Import bank announced a new loan of $35 million to Israel for agricultural development.

Although the vast scale on which immigration into Israel was organized greatly augmented the strain on the country's economy, the policy of unrestricted entry was continued and on July 5 the Knesset passed unanimously the Law of Return which stated that every Jew had the right to settle in Israel. This was the logical outcome of the policy of the gathering-in of the exiles (*Kibbutz Galuyot*) which was incorporated in the original proclamation of independence. The total number of Jews who had immigrated since May 1948 was stated by Ben-Gurion on Nov. 1 to be 510,000, which gave the country at that date a Jewish population of 1,165,000. The Arab population (Christian and Moslem) was estimated to be 165,000. As a result of the influx of large numbers of Jews from the Moslem countries of the middle east it was estimated that more than a third of the post-May 1948 immigrants had come from Asia and Africa, of whom some 50,000 originated in the Yemen whence they were transported by air under a scheme known as "operation magic carpet," which was completed on Sept. 24, at a cost of over $5 million.

Whereas the years 1948 and 1949 were notable for the young state's military and diplomatic struggles and the outstanding characteristic of 1950 was the economic crisis, it became apparent during the year that other grave problems were arising. One of these was the tension between the church (or synagogue) and the state, which had a bearing on the ministerial crisis and which also claimed attention at various times during the year, for instance when questions of education in the immigrant camps and religious observance in the armed forces were discussed. Another problem was that of the proper relationship between Israel and the Jewish communities in the *diaspora*. The theory was loudly proclaimed in Israel and abroad that with the establishment of the state the time arrived for what was called the "liquidation of the *Galuth*." This led to no little resentment in various Jewish communities of the west and especially in the U.S., the continuation of whose active co-operation with Israel was never more essential. On Aug. 23, the prime minister seized a suitable opportunity to affirm that "the government and people of Israel fully respect the right of Jewish communities in other countries to develop . . . in accordance with their own needs and aspirations." The first municipal elections to be held since the establishment of the state took place on Nov. 14 when about 70% of electors voted and showed that the Labour party (Mapai) was tending to lose votes to the General Zionists, a centre party.

In the field of foreign affairs the over-riding fact was the continuing unsatisfactory state of Israel's relations with its Arab neighbours. The hopes that prevailed in January at the conference that took place at Geneva under the auspices of the U.N. Palestine Conciliation commission that a peace treaty would be signed with Jordan (*q.v.*) were not fulfilled and on July 10 the commission announced the failure of its mediation efforts. Further attempts were made to bring the parties together but without success. With a view to lessening the danger of an armament race's developing in the middle east, Great Britain, France and the U.S. announced on May 25 certain steps which they were taking to check the flow of arms to Israel and the Arab states. At the beginning of November the Israeli delegate to the U.N. declared that his government was ready to negotiate directly with the Arab states under the auspices of the U.N. and was prepared to give priority to a discussion of the Arab refugee problem. He said that his government would pay fair compensation for abandoned property but could not agree to the return of considerable numbers of refugees (*see* also ARAB LEAGUE). Israeli relations with Great Britain showed a marked improvement. *De jure* recognition was accorded by the British government on April 27, three days after Jordan's formal annexation of Arab Palestine, while several marks of friendship were exchanged between the two countries. As tension between east and west increased Israel showed more clearly in spite of every attempt to remain aloof from the conflict, that its attachments were with the west. On Sept. 10, the U.N. accepted the government's offer to despatch medical supplies to the U.N. forces in Korea. By the end of November 61 countries had accorded recognition to the state of Israel of which not the least significant was India, which took this step on Sept. 18. (*See* also JERUSALEM.) (D. F. K.)

Education. (1949) Jewish schools: kindergarten 644, teachers 927, pupils 22,894; elementary 447, teachers 3,916, pupils 85,585; secondary 38, teachers 704, pupils 10,498; technical 24, teachers 230, pupils 2,096; special 2, teachers 7, pupils 172; teachers' training colleges 9, teachers 176, pupils 1,166; institutions of higher education 4; Hebrew university (Jerusalem), professors and lecturers 208, students 1,500. Non-Jewish schools: elementary 45, teachers 165, pupils 7,091; secondary 1, teachers 11, pupils 404.

Agriculture. Main crops ('000 metric tons, 1947; 1948 in brackets): wheat 13 (16); barley 9 (9); maize and durra 6 (10·4); oats 1 (1); potatoes 31 (26); tobacco 0·6; vegetables 2·5; grapes 9 (17·8); olives (1949) 1·2 (0·3); bananas (1948-49) 3·5; other fruits 1948-49) 7·4. Livestock ('000 head): cattle 33; sheep and goats 23; horses and mules 5; asses 2; turkeys 17; ducks and geese 22; chickens 2,369. Fisheries, total catch (1948-49): weight 3,500 metric tons; value £1 1,583,900.

Industry. Electricity (million kwh., 1949) 329. Manufactured goods ('000 metric tons, 1949): cement 241; refined oils 10·6; margarine 7·3; soap 5·4; flour 96·8; beer ('000 litres) 8,936·5; wine ('000 litres) 6,500·8.

Foreign Trade. (Million £I, 1949; 1950, six months, in brackets) import 87·7 (51·4); export 10·2 (7·9). Main sources of imports (1949): U.S. 31·3%; U.K. 9·3%; Canada 3·8%. Main destinations of exports: U.K. 53·8%; U.S. 15·6%; Netherlands 6·7%. Main imports: machinery 11%; grain and flour 8·5%; aircraft, ships and vehicles 7·6%; iron and steel manufactures 5·8%. Main exports: food, drink and tobacco 73·3%; manufactured goods 25·6%.

Transport and Communications. Roads (1949): 1,194 mi. Licensed motor vehicles (Dec. 1949): cars 8,000; commercial 13,000. Railways (1949): 438 mi.; freight net ton-mi. 15 million; freight carried ('000 metric tons) 390. Shipping (Dec. 1949): merchant vessels 27; total tonnage 78,649. Air transport (1949): passenger arrivals 70,706; passenger departures 23,215; freight incoming 293,416 kg.; freight outgoing 159,717 kg.; air mail despatched abroad 55,680 kg. Wireless licences (1949): 143,907.

Finance and Banking. (£I million) budget (1949-50 est.) revenue 46·4, expenditure 48. Currency circulation (Dec. 1949; Sept. 1950 in brackets) 50·1 (69·7). Monetary unit: Israeli *pound* at par with pound sterling and with an exchange rate of £1 1 = $2·80.

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ITALIAN COLONIAL EMPIRE: *see* ERITREA; LIBYA; SOMALILAND, ITALIAN.

ITALIAN LITERATURE.

During 1950 the novel was more or less the predominant form in Italian literature, but its theme shifted in general from the war period to that which immediately followed. A book called *L'Orologio* by Carlo Levi, if not on the level of *Cristo si è fermato a Eboli*, yet made its mark; it described the political life of newly

liberated Italy, making the resignation in Nov. 1945 of the government of the former resistance leader, Parri, its tragic climax.

The *Premio Strega* for 1950 was awarded to Cesare Pavese for his novel *La Luna e i falò*. When on Aug. 27 he committed suicide within a few days of his 42nd birthday, the Italian literary world was prematurely bereaved of one of its most gifted members. Among other things he had distinguished himself as a translator of Anglo-American literature, in particular of *Moby Dick*.

Pavese had been a northerner from Piedmont. The *Premio Venezia*, a much-coveted distinction awarded by a committee which included Aldo Palazzeschi and Pietro Pancrazi, went to a 30-year-old southerner, Michele Prisco. He had written a novel called *Gli Eredi del vento*, which Vasco Pratolini described as " a naturalistic novel in a psychological key."

The *Premio Viareggio*, perhaps the best-known of the Italian literary awards, was divided in 1950 between the novelist Francesco Jovine (who had died a few months earlier) for his *Terre del sacramento* and Carlo Bernari for his *Speranzella*. The *Premio Bagutta* for 1950 was awarded to Vitaliano Brancati for *Il Bell'Antonio* published in 1949.

Several other novels enjoyed success. On the one hand *La Nuova Tebaide* by Nicola Lisi, a devout writer of some standing, provided as it were a surrealism of piety; at the same time, as one critic wrote, in Lisi the poetry of the Tuscan landscape is always to be heard. At the other end of things there appeared a book called *La Fiorentina*, the realistic confessions of an uneducated woman, Flora Volpini, who made no secret of her relations with various well-known literary figures. It was presumed that her lovers had contributed to the writing of the book, which could scarcely have come from her unaided, but it was felt nevertheless that she had made a direct contribution: her book had integrity without indecency.

Apart from the prevalent novel form, Gianna Manzini published a diary or autobiography called *Ho visto il tuo cuore*; Massimo Mila's essay, *L'Esperienza musicale ed estetica*, was praised; and Pancrazi published a book of criticism, *Nel giardino di Candido*. That in a year of mounting anti-Slav nationalism in Italy the foreign minister, Count Sforza, should publish a book friendly towards Yugoslavia, *Jugoslavia — storia e ricordi*, was, as one reviewer wrote, a consoling fact in itself. Paolo Monelli's *Mussolini piccolo borghese* provided an objective psychological study of the former *duce* which left little of the heroic legend that the neo-fascists had hoped to re-create.

Italy's leading poet, Giuseppe Ungaretti published *Terra promessa*, and the *Premio San Marino* was awarded to the celebrated poet Eugenio Montale. The hitherto little known Ferrarese, Antonio Rinaldi, published at the end of 1949 a volume of lyrics called *La Notte* and was hailed by many readers as the poet of 1950.

Periodicals of various kinds still played an important, if precarious, role. *Belfagor*, *Il Ponte* and *Ulisse* were joined by *Paragone*, edited in Florence by Roberto Longhi and devoted to literature and art in alternate numbers. The weekly, *Il Mondo*, continued to make an important contribution to Italian writing. (E. Wi.)

ITALY. Republic of southern Europe, bounded on land N.W. by France, N. by Switzerland and Austria and N.E. by Yugoslavia. The country includes not only the whole of the Apennine peninsula, but also the large Mediterranean islands of Sicily and Sardinia and a number of smaller islands. Area: 116,226 sq.mi., excluding Venezia Giulia, Zara and the islands (2,843 sq.mi.) ceded to Yugoslavia, the five small areas in the Alps ceded to France (273 sq.mi.) and the free territory of Trieste (*q.v.*). Pop.: (1936 census) 42,444,588, in the territory of the date of census; (mid-1949 est.) 46,110,000. Language: mainly Italian, but in Venezia Tridentina there were *c.* 210,000 German-speaking Tyrolese and *c.* 10,000 Romansch-speaking Ladins; in the area east of Udine there were *c.* 11,200 Slovenes; and the population of Val d'Aosta (*c.* 6,600) was French-speaking. Religion: mainly Roman Catholic (99·6%). Chief towns (pop., 1948 est.): Rome (cap., 1,613,660), Milan (1,277,013); Naples (995,257); Turin (719,528); Genoa (657,634); Palermo (470,780); Florence (377,203); Bologna (329,964); Venice (308,677). President, Luigi Einaudi; prime minister, Alcide De Gasperi (*q.v.*).

History. On Jan. 12 the sixth De Gasperi cabinet, which had dragged out a rather uncertain existence after the Socialists had left it on Oct. 31, 1949, resigned. The president of the republic immediately asked De Gasperi to form a new government which he succeeded in doing by the end of the month. His seventh cabinet differed from its predecessor in certain minor ways. It had, for instance, no Liberal members, since the Italian Liberal party was too conservative to approve of the prime minister's plans for agrarian reform. On the other hand, two of the most progressive Christian-Democratic ministers, Amintore Fanfani and Giorgio La Pira, left office, and the small Republican contingent of ministers was reinforced by the appointment of Ugo La Malfa, a financial expert, as minister without portfolio to co-ordinate the activities of state-controlled economic concerns. The Saragat Socialists had been challenged by the Socialist group led by Giuseppe Romita and Ignazio Silone, which had just formed the new Party of Socialist Unity (P.S.U.); this objected to Socialist collaboration with De Gasperi and above all with the uncompromising Mario Scelba who was to retain the Ministry of the Interior. For the time-being Giuseppe Saragat himself decided to confine his activities to the work entailed by his position of secretary general of his party but agreed to the appointment of three of his colleagues as ministers of foreign trade, transport and mercantile marine.

Communists and Fascists. The country was in a state of considerable turmoil which was fundamentally due, as ever, to over-population and the sharply uneven distribution of wealth. On Jan. 9, immediately before the government's resignation, there had been a typical crisis at Modena, one of the " red " towns of Emilia. Working people had demonstrated against the management of a metallurgical factory which, after closing for 34 days, had reopened with 250 employees instead of 565. The police intervened without much restraint and there were six killed and a good many injured among the demonstrators. The incident aroused indignation far beyond Modena; there were strikes and further clashes, and finally the factory agreed to reinstate the men who had been dismissed.

In addition to the industrial workers' desperate fear of dismissal, peasant unrest, which had come to a head in Calabria in the previous November, was on the increase. Unauthorized squatting on the land continued, not only in the south but also in the valley of the Po where, owing to the downward trend of foodstuff prices, the farmers, too, were more and more reluctant to employ the number of farm labourers pressed upon them by the authorities.

The Communist party and the still powerful General Confederation of Labour (C.G.I.L.) directed by the Communist leader Giuseppe Di Vittorio made fresh efforts to exploit the position, more particularly in order that the Holy Year pilgrims should see the country disturbed. Towards the end of February an economic conference took place under Communist auspices at which a plan was put forward for the immediate engagement of 700,000 men on development work to be financed by credit and currency expansion:

great play was made with this proposition by contrast with government credit policy. On March 21 two workers were shot dead by the police at an unauthorized demonstration at the village of Lentella in the Abruzzi. The Communists immediately called a 12-hour strike from 6 A.M. on March 22 throughout Italy, which led to disturbances all over the country.



President Luigi Einaudi (left) in a gondola at Venice with G. B. Gianquito, Communist Mayor of Venice, in Sept. 1950.

A large part of the population was naturally exasperated by the Communists' tactics. This accelerated the revival of fascism which had been marked in Jan. 1950 by the appointment of Count Alberto De Mersanich, a former Mussolinian official, as leader of the now frankly Fascist M.S.I. (Movimento Sociale Italiano). Although fascism was still legally forbidden, fascist ideas became more and more popular among students and schoolboys, and groups of M.S.I. *squadristi* became openly active and were sometimes paid by employers to support their resistance to labour demands. This led to clashes between Fascist and Communist toughs, and in its turn provoked a part of the working class into more obstinate devotion to the Communist party, still more since the police tended to show a preference for Fascists. The second trial of Rodolfo Graziani, Mussolini's last war minister, from February to May, and his release in August, stimulated rival passions; in September the foundation of the *Popolo di Roma* newspaper with former Fascists on its staff, inflamed them afresh. On Nov. 21 the cabinet approved a draft bill modifying the methods hitherto used to repress neo-fascist activities.

It was clear in the spring of 1950 that drastic action was called-for from the government. On March 7 General Carlo De Simone was appointed prefect of the Communist stronghold of Bologna. On March 18 special measures were introduced restricting the right of public meeting (hence the clash on March 21); the police were increased and trained in new methods such as hosing an unruly crowd with coloured water which stained people's clothes, facilitating identification.

On the more positive side De Gasperi set about the implementation of his programme for the adjustment of relations between capital and labour, for the rationalization of industry and for agrarian reform. On April 30 the Catholic free trade unions (L.C.G.I.L.), formed in 1948, and the F.I.L., which had broken away from Communist leadership in 1949, joined together to form the new Confederazione Italiana dei Sindacati dei Lavoratori (C.I.S.L.). This body, under the leadership of Giulio Pastore, in general supported the government; it claimed a membership of some 1,500,000. A little earlier a group of P.S.U. Socialists had broken away from Di Vittorio to form their own anti-government Union of Italian Labour (U.I.L.); the C.G.I.L. in spite of these various defections still claimed a five-million membership.

Industrial Unrest. A large sector of Italian heavy industry and especially the Milan and Genoa ex-armament and ancillary concerns had ever since the end of the war been economically impossible to rationalize and socially impossible to close down. On May 13 the government announced its decision to wind up the Mechanical Industries fund (F.I.M.) through which these concerns had been kept going. Although some E.R.P. money was to be substituted, this led to the long-threatened closing down of a series of factories. The Ansaldo shipyards at Genoa dismissed over 4,000 people in September; altogether at least a tenth of the Genoese population was directly affected by dismissals at this time. Other factories in Milan and at Savona also dismissed large numbers. In some cases, rather than face starvation, workmen occupied the factories and ran them on their own: certainly until late in the year, the authorities often made no attempt to intervene, but sometimes they evicted the hands from the factories and this usually led to a more or less serious clash. In the Ansaldo shipyards the lock-out ended with a temporary compromise on Dec. 11, after 72 days.

After what had seemed like endless quarrels and negotiations between employers and all three groups of trade unions, an agreement was reached in the middle of October by which disputed cases of dismissals were to be submitted to a new board of conciliation representing both capital and labour and established experimentally until Dec. 1951. When the discussions on wages broke down on Nov. 11, this was followed by a strike on Nov. 14 which was backed by the C.I.S.L. as warmly as by the C.G.I.L. An agreement on wages was however reached on Dec. 8.

An interesting commentary on labour disputes and the general situation was provided at the end of September by a go-slow strike initiated by the very magistrates of Milan; on Oct. 3 the magistrates of 12 other provinces expressed sympathy with its aims.

Despite all difficulties production tended to rise even during the first half of the year, before, that is, the large-scale rearmament of western Europe following the outbreak of war in Korea. Unemployment figures somewhat diminished, although in view of the intricacies of under-employment in Italy it was always hard to be sure of the basis upon which such calculations were made; at all events building supplied a good deal more work than had been the case since the end of the war. By comparison with 1949 the production of natural gas more than doubled and big firms switched over to gas from coal.

Drilling for oil continued; for the present it led to no large-scale production. But much was hoped for the future and in July the government announced the foundation of the Istituto Nazionale Idrocarburi (I.N.I.).

In the textile industries, however, there was something like depression. This was known to be largely attributable to the lightheartedness with which Italian textile manufacturers, who had made big profits immediately after the war, had nevertheless failed to reinvest in the improvement of their plant. Both Communists and E.C.A. representatives and indeed critics on all sides blamed both government and individual manufacturers for their failure to invest more in capital equipment. Although on April 5 Giuseppe Pella, the minister of the treasury, had announced the further reduction of the bank rate from 4½% to 4%, E.C.A. officials complained that the policy of the Italian government was

still so deflationary as to wither the country's economic potentialities; at one time or another they objected to the failure to utilize available funds or to the high proportion devoted to importing foodstuffs rather than to bold investment. This criticism reached a climax in October when Leo Dayton, the recently appointed chief of the E.C.A. mission in Italy, gave voice to it in a number of public pronouncements.

The Land Reform. The Italian government's most notable achievement in 1950 was made in the direction of land reform. In the middle of March De Gasperi announced a ten-year plan with provision for the necessary funds for the relief of unemployment in, and the development of, the most backward areas of the country; the project was in due course to incorporate a measure of land redistribution such as to reduce the area of large neglected estates for the benefit of peasants hitherto without land of their own. This agrarian reform was to be carried out in three stages. The first of these involved the establishment of 1,000 or more peasant families from the wretched Ionian coast of Calabria, where there had been so much disturbance after Nov. 1949, on the nearby and fertile but uninhabited Sila plateau. This project was drawn up in Jan. 1950 and was approved by the Senate in March and by the Chamber of Deputies in May: on Sept. 24 the first 30 peasant families received small farms in time for the autumn sowings, on a 30-year hire-purchase system. Altogether the Sila plateau was expected to provide about 3,750 ac. for about 400 families.

The second stage of land reform concerned the depressed areas of Italy as a whole, mainly, but not only, in the south and Sicily and Sardinia. By Oct. 12 both chambers had approved the transfer of some 1,750,000 ac. of land in these regions. This land was to be taken from the largest and least productive estates by June 30, 1951; the former owners were to receive compensation according to the taxable value of the land; its development was to be financed out of the funds put aside for the implementation of the ten-year plan. The third stage of land reform was expected to lead to the transfer of nearly 2 million ac. more in all parts of the country at a future date.



A traffic policeman in Milan receiving the traditional gifts from motorists on Epiphany day, Jan. 6, 1950.

It should be noted here that the death of the bandit leader, Salvatore Giuliano (*see* OBITUARIES) at the hands of the police on July 6, 1950, prepared the way for more orderly conditions in Sicily.

Foreign Policy. De Gasperi and Count Carlo Sforza, the foreign minister, continued to conduct Italian foreign policy along the path of close co-operation with western Europe and above all with the United States, the fount of Italy's economic life. Although Italy was without the raw materials which the Schuman plan was meant to pool, Rome responded with alacrity to the invitation to join in the conversations on the subject in June. These offered an important opportunity for Italy to demonstrate her belief in the European idea from which, at some other time, she might hope to profit more directly.

In Africa Italy assumed the United Nations trusteeship over her former colony of Somalia on April 1, 1950, for a period of 10 years. This return did something to allay Italian soreness over the fate of the pre-Fascist Italian empire A Somaliland frontier dispute crowned the irritation which the Italians had all along felt against the British Military administration in their former colonies. Throughout the first half of 1950, indeed, Italian feeling against Great Britain mounted. At first there had been objections to the alleged Labour party interference in Italian politics in favour of the P.S.U. against the Saragat Socialists and then disapproval of British reticence towards the Schuman plan. In addition the publication of a wartime dispatch of Lord Alexander's, in which he seemed to belittle Italy, led, from June 12 for the next week or so, to a furious press campaign in which Communists joined with right-wing nationalists.

With the war in Korea the question of how the country was to be defended merged foreign with internal policy more and more completely. The idea of disarmed neutrality, which had had some popularity after the war, was almost forgotten. The Communists, of course, professed to regard the U.S. as the corrupter of Italy and a menace to world peace, though it was whispered with persistence that some Communist leaders were disturbed by the policy of the Kremlin. By all non-Communists the Communist party, and with it a great part of the working-class, were together increasingly regarded as Russia's "fifth column"; and anti-working class legislation, tending to condemn strikes and demonstrations as sabotage, was adopted as a part of Italy's rearmament. (E. WI.)

Education. Schools (1947-48): elementary 38,123, pupils 4,835,566, teachers 215,501; secondary 1,188, pupils 373,608, teachers 30,568; technical secondary 2,143, pupils 310,320, teachers 27,483. Universities: and institutions of higher education 27, students 180,134, professors and lecturers 3,674.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 6,940 (7,188); maize 2,202; barley 227 (278); oats 415 (567); rice, paddy 591; rye 125 (131); potatoes 2,640 (3,149); sugar, raw value 483; cotton, ginned, 3; hemp 72·2; linseed 11; tobacco 60; grapes (1950) 5,906; olives 1,090; fresh figs 402; tomatoes 1,075. Citrus fruits ('000 metric tons, 1948): oranges and tangerines 410; lemons, limes, grapefruit and other 284. Olive oil (1949): 179,000 metric tons. Wine production (1949): 35,825,400 hectolitres. Livestock ('000 head): cattle (July 1949) 8,300; sheep (July 1949) 10,100; pigs (Jan. 1948) 3,757; horses (1948) 720; donkeys (1949) 547; mules (Jan. 1948) 301. Wool production, greasy basis (1949), 16,000 metric tons. Meat production ('000 metric tons, 1949): total 230, of which beef and veal 122; pork 89; mutton and lamb 19. Fisheries, total catch (1949) 15,200 metric tons.

Industry. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 1,104 (542); lignite ('000 metric tons) 833 (400); manufactured gas (million cu. metres) 1,584 (800); electricity (million kw.hr.) 20,784 (10,128); crude oil ('000 metric tons) 9·1 (4·5). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): iron ore, metal content, 521 (233); lead ore 58 (30·8); zinc, smelter production 26·4 (17·4); pig iron 445 (268); steel ingots and castings 2,052 (1,119); manganese ore 24 (9); bauxite 105 (69). Manufactured goods ('000 metric tons, 1949; 1950, six months, in brackets): cement, 90% of total production, 4,032 (2,295); cotton yarn 209 (108); rayon filament yarn 49·9 (23·9); rayon stable fibre 36·2 (20·1); jute yarns

(1948) 50; wool yarns (1948) 41; all types of paper and cardboard (1949) 408. Production of automobiles (1949): 86,054, of which passenger cars 65,379; vans 13,749; heavy trucks 4,953; buses 1,973. Index of industrial production in 1949 (1938=100): general index 104; mining 107; manufactured 98, of which textiles 99; timber 57; paper 86; rubber 115; chemicals 101; petroleum and coal products 165; metallurgy 92; electricity and gas 135.

Foreign Trade. (Million lire, 1949; 1950, six months, in brackets.) Imports 855,062 (451,397); exports 632,567 (333,519). Main sources of imports (1949): U.S. 35·2%; Australia 5·6%; Argentina 5·3%; Germany 4·4%. Main destinations of exports (1949): Argentina 12·3%; U.K. 10·6%; Germany 8·4%; France 5·7%. Main imports (1949): cereals and flour 19·6%; coal and coke 11·5%; raw cotton 10·8%; wool 8%; petroleum and products 6·2%. Main exports (1949): cotton yarn and manufactures 14·3%; fruit and vegetables, fresh and canned, 13·4%; machinery 11·8%; rayon and stable manufactures 10·2%; vehicles 7·6%.

Transport and Communications. Roads (1949): 105,987 mi. Licensed motor vehicles (Dec. 1949): cars 266,928; commercial 213,849. Railways (1949): 13,377 mi.; passenger-mi. 12,787 million; freight carried 39 million metric tons. Shipping (July 1949): number of merchant vessels over 100 gross tons 1,025; total tonnage 2,444,965. Civil aviation traffic (1949): passengers departing and arriving 632,700; cargo loaded and unloaded 23,400 tons. Telephones (1948): subscribers 658,813. Wireless licences (1949); 2,543,000.

Finance and Banking. (Million lire) budget: (1949-50 actual) revenue 1,280,483, expenditure 1,578,849; (1950-51 est.) revenue 1,285,808, expenditure 1,462,034. National public debt (May 1950): 2,323,205. Currency circulation (Aug. 1949; Aug. 1950 in brackets): 915,700 (984,300). Gold and foreign exchange (million U.S. dollars, June 1949; June 1950 in brackets) 775 (898). Bank deposits (million lire, June 1949; June 1950 in brackets) 1,220,200 (1,303,900). Monetary unit: *lira* (pl. *lire*) with exchange rate 1,750 lire to the pound and 625 lire to the dollar.

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IVORY COAST: *see* FRENCH WEST AFRICA.

JAKARTA (DJAKARTA), capital of the republic of Indonesia. Area: 48·3 sq.mi. Pop.: (1930 census) 435,184, (1950 est.) 1,200,000. Mayor, R. Suwirjo.

In 1610 the Dutch East India company obtained from the local chieftain a lease in the vicinity of the native town of Jakarta, for building a lodge. In 1618 a castle was established on the spot which, during an unsuccessful siege by British and Native forces, was given the name of Batavia; after a Dutch counterattack the town of Jakarta was captured and destroyed. For two centuries the Batavia castle and the settlement surrounding it remained the centre of the Dutch East India company's interests and expanding authority in the archipelago; its layout, the system of canals and bridges, resembled the prototype of Dutch cities. Towards the end of the 18th-century unsanitary conditions in Batavia caused many well-to-do inhabitants to move to suburbs situated on higher land at some distance from the coast. In 1809 the seat of government was transferred to this new residential centre called Weltevreden (Well-content) and old Batavia gradually assumed the character of a " down town " business district.

Since 1905 the twin cities, linked by a canal with busy motor roads running alongside and by electric streetcars, formed a single municipality. In the down town area the big, modern bank buildings were the most striking feature. Offices of various trading concerns and law firms were for the greater part established in old buildings along the Kali Besar (Great River). In the residential part modern bungalow districts alternated with Indonesian villages, parks and gardens. This district also boasted most of the government departments' buildings and the twin palaces of the former governors general, from Dec. 1949 occupied by the president of Indonesia, surrounding the spacious Independence square (Medan Merdeka). (W. G. P.)

JAMAICA. British colony and dependencies, the colony being the largest of the British West Indian islands. Dependencies: Cayman Islands (93 sq.mi.; pop. 6,670) and Turks and Caicos Islands (166 sq.mi.; pop. 6,138), with local legislatures and a large degree of internal autonomy. Area (colony): 4,411 sq.mi. Pop.: (1943 census) 1,237,063; (1949 est.) 1,388,900, mainly of African descent. Language: English. Religion: Christian, incl. (1943) Anglican 350,311, Presbyterian 92,975, Roman Catholic *c.* 70,000. Chief towns (pop. 1943 census): Kingston (cap., 201,911); Spanish Town (12,007), Montego Bay (11,547). Administration: governor; privy council to advise on the exercise of the Royal prerogative and discipline of the civil service; executive council, 2 nominated and 8 selected members; Legislative Council, 3 *ex officio*, not more than 2 official, not less than 10 nominated unofficial members; House of Representatives, 32 members elected on universal suffrage. Governor: Sir John Huggins.

History. The Labour party, led by W. A. Bustamante, in 1950 retained its working majority in the House of Representatives, and debate by the House on proposals for a revision of the constitution granted in 1944 was deferred. Consideration of the recommendation of the British Caribbean Standing Closer Association committee that a form of federal government should be established in the British West Indies was also postponed. A comprehensive revision of the structure and salaries of the civil service was undertaken. In February Princess Alice, Countess of Athlone, was installed as first chancellor of the University College of the West Indies at a colourful ceremony attended by representatives of all the British West Indian governments and of many universities.

During the year, a bill providing for land taxation on unimproved value was introduced in the legislature. An important agricultural development was the acceptance by the Jamaica Agricultural society, a unique quasi-government organization, of the government's proposals that the society's extension services should be integrated with those of the Agricultural Department. The approval of the legislature to this arrangement was to be sought. A large citrus-processing plant, established by the Citrus Growers' association, began operations. Industrial development continued. A law was enacted to provide special concessions, relating chiefly to income tax and customs duties, to companies engaged in the production of bauxite. Reynolds Metals, Ltd., representing United States interests, began extensive preliminary work on the erection of a pier for shipment of ore and on the provision of mining installations; while Jamaica Bauxite, Ltd., a subsidiary of the Aluminium Company of Canada, also proceeded with preparatory work. Work began on a cement factory. The tourist trade continued to be a large dollar-earner, and all hotels enjoyed good seasons. The new hotels were completed.

A new education authority was established to take the place of the several bodies responsible for planning education policy. It was to deal with the whole range of educational facilities provided by the government. Good progress was made with the establishment of juvenile courts. A scheme for rural libraries was extended, with the assistance of the British Council, to several areas. In May, broadcasting ceased to be operated by the government, when a licence granted to a commercial undertaking, the Jamaica Broadcasting company, a subsidiary of Broadcast Relays, Ltd., became effective.

During 1950, a first issue of £500,000 premium bonds to finance agricultural and industrial development met with a very good response. In October, arrangements began for the establishment of observation posts in the Turks and Caicos islands for use in connection with the Anglo-United States project at Cocoa, Florida, for the development of guided missiles.

Finance and Trade. Currency: the pound sterling with local notes. Budget (1950 est.): revenue £10,356,594; expenditure £10,491,757. Foreign trade (1949): imports £19,225,539; exports £12,137,496. Principal exports: sugar, rum, bananas, citrus, tobacco.

(P. H.-M.)

JANSEN, ERNEST GEORGE, South African statesman (b. near Dundee, Natal, Aug. 6, 1881) was educated in Natal and received a law degree at Capetown university. He was admitted as attorney in 1906 and took an active part in politics. He became secretary of the National party in Natal. After two unsuccessful attempts to enter the House of Assembly in 1915 and 1920 Jansen was elected for Vryheid, Natal, in 1921. He retained his seat until defeated in the general election in 1943. He was again defeated in Zululand constituency but returned to the House as member for Wolmaransstad in a by-election. On the assumption of office by the General James Hertzog government he was elected speaker. He held this office until 1929 when he was appointed minister of native affairs. In 1933 he relinquished this portfolio to resume the duties of speaker until 1943. After the general election in May 1948 he again became minister of native affairs, holding this office until Oct. 1, 1950. In November he visited London, where he was received by the King, and on Jan. 1, 1951, Jansen succeeded Major Gideon Brand van Zyl as governor general of the Union of South Africa. A keen worker for Afrikaans culture, he was a foundation member of the South African Academy for Language, Literature and Art and was chairman of the Voortrekker Centenary committee. He was made a doctor of literature by Witwatersrand university in 1938.

JAPAN. Island nation in the western Pacific, under Allied military occupation following its defeat and surrender in 1945. In accordance with the Cairo and Potsdam declaration, Japan was stripped of its former overseas possessions and reduced to the following four main groups of islands:

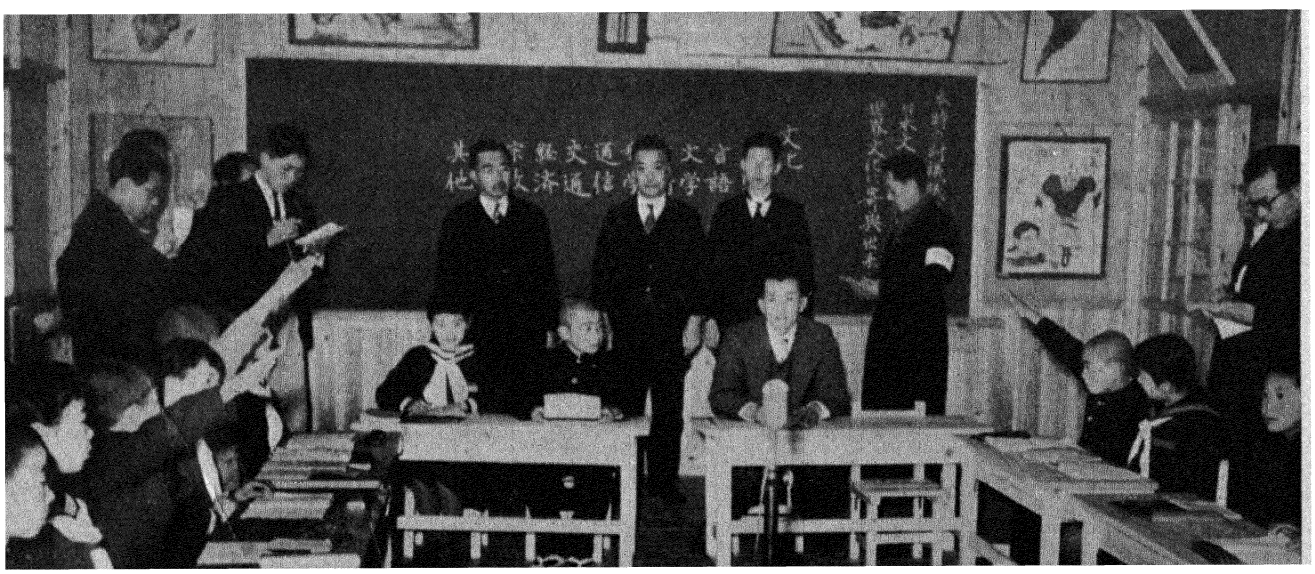
Honshu (with 382 adjacent small islands)	88,919 sq.mi.
Shikoku (with 167 islands)	7,248 sq.mi.
Kyushu (with 373 small islands)	16,247 sq.mi.
Hokkaido (with 68 small islands)	34,276 sq.mi.
Total	146,690 sq.mi.

Population of Japan proper: (1940 census) 73,114,308; (July 1, 1950, est.) 83,840,000. Language: Japanese. Religion: Buddhist, Shintoist and Christian (in 1933 there were 191,000 Roman Catholics and 249,000 members of other denominations). Chief towns (first figure, 1940 census; second figure, 1947 est.): Tokyo (cap., 6,778,804; 4,174,505); Osaka (3,252,340; 1,559,310); Kyoto (1,089,726; 999,396); Nagoya (1,328,084; 853,085); Yokohama (968,091; 814,268); Kobe (967,234; 607,202).

Supreme commander for the Allied Powers: General Douglas MacArthur (*q.v.*). Allied council for Japan (an advisory body in Tokyo): William J. Sebald (U.S.), deputy for the supreme commander, chairman; General Chu Shih-ming (Nationalist China); Lieut. General William R. Hodgson (representing jointly the U.K., Australia and New Zealand); Lieut. General Aleksey Kislenko (U.S.S.R.). The policy-making body is the Far Eastern commission sitting in Washington under the chairmanship of Maxwell M. Hamilton (U.S.) and comprising the representatives of Australia, Burma, Canada, China, France, India, Netherlands, New Zealand, Pakistan, Philippines, United Kingdom and the U.S.S.R. Emperor, Hirohito; prime minister, Shigeru Yoshida.

History. During 1950 the Far-Eastern commission (F.E.C.) in Washington, D.C., the nominal policy-making body, played on the whole a passive role, as did the 4-member advisory Allied council in Tokyo. The Soviet Union left the F.E.C. in January, demanding the expulsion of the Chinese Nationalist member, but returned in October. Soviet participation in the Allied council was intermittent, because of the continuing dispute over repatriation of Japanese war prisoners from the U.S.S.R. In April the Soviet Union announced that repatriation had been completed, but the U.S., maintaining that more than 300,000 prisoners were still unaccounted for, in August joined with Great Britain and Australia to ask a U.N. investigation of the matter, which was voted by the U.N. assembly in December. The Soviet Union for its part charged that the U.S. was secretly rearming Japan and that it was using Japanese troops in the war in Korea. Both charges were denied by the U.S.

Towards a Peace Treaty. Pressure for the conclusion of a peace treaty increased in 1950 in Japan and elsewhere. On Sept. 14 President Harry S. Truman announced that the United States was beginning informal conversations with interested powers on the subject. An outline of proposed peace terms released by the U.S. on Nov. 24 called for a U.S. trusteeship under the U.N. for the Ryukyu and Bonin Islands;



Emperor Hirohito (left background) visiting an elementary school during an extensive tour of Shikoku island in March 1950.

the status of Formosa, the Pescadores, southern Sakhalin and the Kuri Islands would be jointly determined by the U.S., Great Britain, U.S.S.R. and China or, failing agreement, by the U.N. assembly; Japan would be admitted to the U.N. The terms outlined would permit the maintenance of U.S. and other troops in Japan, by agreement with the Japanese, to safeguard Japan's security. No restrictions on Japanese rearmament were proposed. Some of Japan's former enemies found these terms too lenient, demanding firmer guarantees against Japanese remilitarization and further reparations. Reparations deliveries under the Advance Transfer programme were completed in May, with $20 million worth of equipment going to China, $8 million to the Philippines, $7 million to Great Britain and $5 million to the Netherlands. The U.S. did not contemplate further reparations payments.

The primary question, however, was whether the U.S. and other countries should conclude a separate treaty or treaties with Japan if agreement with the U.S.S.R. (and Communist China, which demanded a voice in the treaty) proved impossible. On Dec. 27 the U.S. intimated in a note to the Soviet Union that it was prepared to proceed without Soviet concurrence. Discussion in Japan itself during the year was focused chiefly on the issue of a separate treaty. The Japanese preferred an over-all treaty, which would give Japan full international status and diplomatic freedom of action. However, Shigeru Yoshida, the prime minister, and his Liberal party maintained that a separate treaty was better than none, deplored further delay and favoured alignment with the western powers. The opposition parties, which hoped that Japan could maintain a neutral position in world affairs, argued for an over-all treaty and opposed the maintenance of U.S. bases in Japan after the treaty was signed. Sentiment for an over-all treaty was strong in the first half of 1950, but the war in Korea caused a swing in the other direction, convincing many that Japan, for the sake of its own security, had no choice but to throw in its lot with the western powers. Early in July the Japanese government announced that it would collaborate in the U.N. operations in Korea by all means that lay in its power, and in a White Paper issued on Aug. 19 it stated that for Japan there was no room for "non-involvement" or "neutrality." This was endorsed by all major parties except the Social Democrats, who, however, supported co-operation with the U.N. in Korea. On July 8 General MacArthur authorized the expansion of the Japanese police force from 125,000 to 200,000 in the interests of internal security.

As in 1949, the emphasis in occupation policy in 1950 was on economic recovery rather than, as earlier, on political reform. Except in the economic stabilization programme, the trend was toward greater autonomy for Japanese governmental agencies. By the end of the year more than 100 convicted war criminals had been paroled; more than 10,000 persons had been removed from the political purge list. An F.E.C. decision of Oct. 3 gave the Japanese courts criminal jurisdiction over Allied nationals, with some exceptions. In January Japan received permission to set up trade promotion offices in the U.S. and other countries willing to receive them, and in February the supreme commander was authorized to permit Japan to take part in international conferences and agreements of a technical character.

Strenuous efforts were made to promote exports through bilateral trade agreements and other means, but Japan was still far from self-supporting. Up to the end of June 1950 the U.S. had spent $1,727 million to support the Japanese economy. Planned expenditures for the fiscal year 1950-51 were $288 million, as compared with $438 million in 1949-50. It was hoped that such aid could be discontinued by 1953.

Domestic Affairs. The government headed by Yoshida



Mamoru Shigemitsu (centre), who as Japanese foreign minister signed the Japanese surrender in 1945, seen here after his release in Nov. 1950 from imprisonment as a war criminal.

continued in office throughout the year, though slightly reorganized after the outbreak of war in Korea. In February part of the Democratic party merged with the Liberals, and in April the remainder joined with the People's Co-operative party and another group to form a new centre People's Democratic party. The Social Democrats split apart in January but later reunited and in April adopted a left-of-centre platform. The June elections, to fill approximately half of the seats in the Upper House, resulted in gains for the Liberals and also for the Social Democrats, with losses for the People's Democrats and other centre groups.

Communist influence declined sharply in 1950, partly as a result of government repression. Japanese opinion was unfavourably affected by widely publicized allegations that Japanese Communists had asked the Russians to return to Japan only those war prisoners who had been indoctrinated with Communism; and Japan was alarmed by the Communist attack in Korea. Still another factor was internal dissension within the Communist party, intensified by the Cominform's January attack on Japanese Communist leaders for pursuing too moderate policies. In May General MacArthur again raised the question whether the Communist party should be outlawed. In June he ordered that 41 leaders of the party should be barred from all political activity under the "purge" directives, originally aimed at militarists. Japanese government measures against Communist or suspected Communist sympathizers were intensified after the outbreak of war in Korea. They included the banning of demonstrations, arrests, dismissal from jobs (more than 10,000 were also dismissed by private industry), raids on party offices and suspension of newspapers and periodicals. Though the Communist party was not outlawed, it was forced to operate largley underground. The left-wing Japan Liaison Council of Trade Unions was dissolved by the government on Aug. 30, and its principal component, the National Congress of Industrial Unions, which had lost much of its membership, voluntarily disbanded on Sept. 20. By the end of the year the great bulk of organized labour was affiliated or co-operating with the General Council of Japanese Trade Unions, under anti-Communist leadership.

In the first half of 1950, under the "austerity" economic programme inaugurated in 1949 and closely supervised by the occupation authorities, the budget was balanced, prices

declined slightly and production and trade registered moderate gains. But many small and medium-sized enterprises, and some larger ones, were hard hit by the prevailing deflationary policies and were forced to suspend wage payments, dismiss employees and in some cases to go out of business. The refusal of the government and of private employers to grant wage increases demanded by trade unions led, in the spring, to a wave of strikes and strike threats in major industries, although large strikes were virtually banned. Moderate trade union leaders had some difficulty in retaining their control, and union membership fell to 5,839,000 in June 1950, against 6,655,000 a year earlier. In response to public demands, shortly before the June election the government promised some relaxation of its stringent financial policies.

The war in Korea altered the picture, creating a minor war boom in Japan and changing a buyers' to a sellers' market. U.S. war orders for goods and services, which reached $143 million by mid-November, stimulated industrial production and prices turned upward. Japanese exports also increased as western rearmament programmes created world-wide commodity shortages, although this also affected raw materials imported by Japan.

Education. With 660,000 teachers working in 1948, from elementary schools to the universities, there was a shortage of about 110,000. About 19 million pupils were enrolled in about 50,000 elementary, secondary and technical schools. There were 6 imperial universities and 39 other institutions of higher education with teaching staffs of about 4,000 and 51,000 students.

Agriculture. Production of staple foods in Japan in 1950 nearly equalled the record established in 1948. Population, however, had increased by 14% since 1940, and even before World War II Japan produced only about 80% of its own food requirements. Food imports since the war (44% of total imports in the year July 1949-June 1950) accounted for a large part of its trade deficit.

TABLE I. AGRICULTURAL PRODUCTION ('000 metric tons)

	1934-38 av.	1948	1949	1950 (est.)
Rice	11,501	11,632	9,380·9	9,431·0
Wheat	1,287	1,042	1,297·3	1,338·3
Barley	1,556	1,566	1,998·0	1,952·0
Sweet potatoes	3 060	6,066	5,912·9	5,851·9
Potatoes	1,622	2,146	2,315·8	2,362·8

Industry. In the autumn of 1949 industrial activity in Japan resumed its upward climb. In the first nine months of 1950 public utilities and mining exceeded prewar levels, while manufacturing output neared its prewar volume. By September the index of general industrial activity (1932-36=100) stood at 110·5 as against 93·7 in Sept. 1949. Other Sept. 1950 index numbers, on the same base, were as follows: public utilities 171·5, mining 111·5, all manufacturing 96·3, metals 130·8, machinery 113·9, textiles 43·7, chemicals 128·0, food, beverages and tobacco 77·8. Non-agricultural employment in July was 17,740,000. In Sept. 1950 the number of persons seeking employment was reported as 854,000, against 477,000 in Sept. 1949; these figures exclude concealed unemployment. Wages (through August) were fairly stable at a level slightly above that of 1949; real wages increased slightly, but were still far below prewar levels.

TABLE II. INDUSTRIAL PRODUCTION

(Monthly average)	1948	1949	1950 (Jan.-Sept.)
Coal ('000 metric tons)	2,822	3,172	3,119
Crude petroleum (metric tons)	14,867	18,129	26,601
Gas ('000 cu. m.)	66,300	80,900	90,300
Electricity (million kwh.)	2,959	3,415	3,610
Pig iron (metric tons)	67,335	129,057	177,647
Steel ingots and castings (metric tons)	142,819	259,284	380,542
Refined copper (metric tons)	4,528	6,170	6,744
Cement ('000 metric tons)	155	273	328
Motor vehicles (units)	3,197	5,538	5,714
Cotton yarn ('000 lb.)	22.898	28,931	40,182
Rayon staple fibre ('000 lb.)	2,939	4,965	11,441
Cotton fabrics ('000 sq.yd.)	76,990	82,072	122,302
Raw silk (bales of 132 lb.)	11,248	13,684	11,497

Foreign Trade. Japanese foreign trade continued to increase in 1950, aided by the Korean war boom in the latter part of the year, but was still only about half of the pre-1940 volume. In the first nine months of the year the excess of imports, financed by U.S. grants, was reduced by 57% from the same period of 1949. In order to dispense with foreign aid, it was estimated that Japan would need at least to double its exports. In 1949 the U.S. provided 64% of Japan's imports, other leading suppliers being China (including Formosa), Australia, Malaya, Egypt, Indonesia, India and the Philippines. Exports were more widely distributed, with the U.S. taking 15%, India 13%, Great Britain 8%, Indonesia 5%, the Philippines 4% and Australia and Korea each 3%. Foodstuffs predominated among imports, followed by cotton, wool and other raw materials. Exports consisted largely of manufactured goods, with cotton textiles the leading item.

TABLE III. FOREIGN TRADE ('000 U.S. $)

	Import	Export	Balance
1947	523,562	173,568	—349,994
1948	683,083	258,271	—424,811
1949	904,617	509,700	—394,917
1950 (Jan.-Sept.)	683,392	533,199	—150,193

Transport and Communications. Traffic on Japanese government railways was as follows in 1949 (monthly average, millions): passenger-km. 5,815·7; revenue freight ton-km. 2,347·4 (corresponding monthly averages for Jan.-Sept. 1950 were 5,456·4 and 2,362·5 respectively.) In addition, private railways carried a monthly average of 37·3 million ton-km. of freight in 1949 and 35·4 million ton-km. in Jan.-Sept. 1950. Japan's merchant fleet remained less than half its prewar size, though it had increased by 50% since 1945; in Sept. 1950 the country had 2,038,210 gross tons of steel vessels of 100 tons and more. In 1949 only 13% of its imports and 32% of its exports were carried in Japanese ships.

Finance and Banking. National government expenditures were budgeted for 1950-51 at 661,406 million yen, a decrease of 76,243 million from the previous year—the first decline since 1934. The principal items were 90,000 million yen for price subsidies (a decrease of 89,200 million), 109,061 million yen for war termination expenses, chiefly occupation costs (a decrease of 15,618 million), and 105,138 million yen for local government, an increase of 34,565 million resulting from the reorganization of national and local finances. Revenues were expected to balance expenditures, with 444,600 million yen coming from taxes and stamp revenue and 132,147 million from receipts from government enterprises. The Bank of Japan's outstanding note issue at the end of Sept. 1950 stood at 328,781 million yen, as compared with 298,202 million a year earlier. In the same period the bank's holdings of government debt declined from 237,378 million yen to 205,809 million. Total deposits of other banks rose from 634,299 million yen in Aug. 1949 to 899,171 million in Aug. 1950. The official value of the yen remained throughout the year at 360 to the U.S. dollar. The gradual tapering-off of price inflation in 1949-50 is shown in Table IV.

TABLE IV. WAGE AND PRICE INDICES

	Wholesale prices (1934-36=100)	Consumer prices (1948=100)	Wages in manufacturing (1934-36=100)
1947	4,820	57·0	3,450
1948	12,780	104·5	9,200
1949	20,880	137·9	14,770
1950 Jan.-Sept.	23,540	128·3	16,950

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JAVA: *see* INDONESIA.

JEBB, SIR (HUBERT MILES) GLADWYN, British diplomat (b. Haslemere, Surrey, April 25, 1900), was educated at Eton and Magdalen college, Oxford. He entered the diplomatic service in 1924 and served in Paris, Tehran and Rome. After serving in the Foreign Office, 1929-40, he was attached to the Ministry of Economic Warfare as temporary assistant under secretary. In 1941 he became acting counsellor of the Foreign Office and in 1942 head of the reconstruction department set up to formulate British postwar foreign policy. Appointed counsellor in 1943, he was a British delegate to the Dumbarton Oaks conference, 1944, and accompanied Anthony Eden to Yalta in 1945. He was executive secretary of the preparatory commission of the United Nations, 1945, and in 1946 acted as secretary general. In the same year he was deputy to the foreign secretary at the conference of foreign ministers in Paris and became assistant under secretary of state and Foreign Office adviser. In 1948 he was United Kingdom representative on the Brussels Treaty commission with the personal rank of ambassador. He was made a K.C.M.G. in the New Year Honours, 1949. In March 1950 it was announced that he had been appointed permanent U.K.

representative to U.N. in succession to Sir Alexander Cadogan. At the end of the month he went to a meeting of the committee of ministers of the Council of Europe at Strasbourg as principal adviser to Ernest Bevin (*q.v.*), the foreign secretary. In April he attended a meeting in Brussels of the consultative council of the Brussels treaty powers and later had talks with Trygve Lie (*q.v.*), the U.N. secretary general, in London. In May he attended discussions between Dean Acheson, Robert Schuman (*qq.v.*) and Ernest Bevin, also in London, where he was later present at a meeting of the North Atlantic treaty council. Taking up his post at Lake Success in June, he soon commanded attention at Security council meetings by his pungent humour and skilled diplomacy, and in September took his turn as chairman of the council, following Yakov Malik (*q.v.*) of the U.S.S.R.

JERUSALEM. The capital of former Palestine, revered as a Holy City by Christians, Moslems and Jews alike, was divided by a demarcation line established in the Israel-Jordan armistice agreement of April 3, 1949. Population (1950 est.): Israel-held new city, 120,000; Arab-held old city, 30,000. Israeli mayor, Daniel Auster; Arab mayor, Arif al Arif Pasha, till Oct. 1950.

On Dec. 9, 1949, the general assembly of the United Nations adopted a resolution, by more than a two-thirds majority, that Jerusalem be placed under an international regime; it called on the Trusteeship council to prepare a statute for international administration of the city. In April the council adopted a draft but did not make any recommendation as to the appointment of the governor or take steps to obtain from members of the United Nations the contribution which had been assessed for the international administration. The draft statute was referred to the general assembly of 1950. The British member of the council made it clear that the British government did not regard an international regime as feasible; and on April 27, 1950, Great Britain in granting *de jure* recognition to Israel, made a declaration recognizing the sovereignty of Israel and Jordan over parts of Jerusalem pending final determination of the status of the area.

The action of the United Nations evoked immediate opposition from Israel. A resolution was passed by the Knesset (parliament) on Jan. 23, 1950, declaring that Jerusalem had again become the capital of Israel, and urging the government to expedite the transfer of the government offices, which had hitherto been placed in Tel Aviv. Speedy action was taken. The Knesset, which after its first sitting in Jerusalem (Feb. 1949) had held its sessions in Tel Aviv, moved. And all the government offices except the ministries of Foreign Affairs and Defence were transferred during the next months. Another step marking the resolution to integrate Jerusalem in the state of Israel was to proceed at once with the building of a large hall for the Zionist congress and a convention centre at which exhibitions would be held. A Jerusalem economic corporation, with a capital of £I 750,000, was founded, with the participation of government and public bodies, for the encouragement of craft and industry; and an exhibition was opened in August, to mark the intention to make Jerusalem an important centre of export industry.

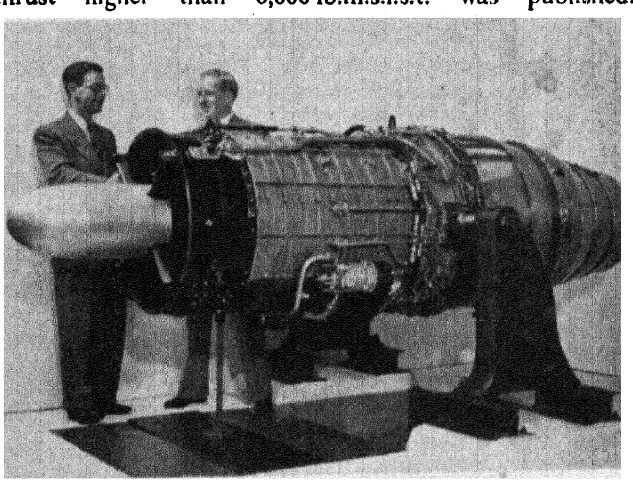
In the Arab city the principal change was the reinstatement of electricity which had been cut off during the war. Arrangements were made between Israel and Jordan for the passage of Christian pilgrims in Holy Year from one area of the city to the other. The Israel delegation to the United Nations submitted to the Trusteeship council in May a proposal for the appointment of a United Nations representative or organ to be responsible for the supervision of the Holy Places. A similar proposal submitted to the U.N. assembly by a group of Protestant states in December and the Belgian proposal to appoint a committee of four to study the protection of the Holy Places and religious interests in the Holy Land both failed to win the necessary majority.

The Hebrew university celebrated in May the 25th anniversary of its opening. As the university was unable to return to its home on Mt. Scopus, the celebrations took place in its temporary quarters, the Terra Sancta college. The first Hebrew World congress was held in July; and a World League for Hebrew was established with its centre in Jerusalem. in order to place the Hebrew language and culture in the centre of the life of the Jewish people. (N. Bh.)

JET PROPULSION AND GAS TURBINES. Steady progress was maintained during 1950 in the development of gas turbines for aircraft propulsion and for industrial purposes.

Great Britain. *Turbo-jets.* No new centrifugal compressor turbo-jets were announced but both Goblin and Derwent continued in production for fighters for Britain and for other countries. The Goblin was approved for 600 hr. life between overhauls and the Ghost contributed to the outstanding, but unpublished, performance of the Venom fighter-bomber. The Ghost Mark 50 obtained the Air Registration board's civil approval at 5,050 lb. maximum sea level static thrust rating. The Nene powered production Attackers and Sea Hawks and, with provision for exhaust reheat, propelled Supermarine 535 and Hawker P.1081 experimental fighters. The Tay (6,250 lb.m.s.l.s.t.) engined the high-speed research version of the Viscount.

Of several axial compressor turbo-jets under development, the largest was the Armstrong-Siddeley Sapphire which completed an official 150-hr. approval test at 7,200 lb.m.s.l.s.t. rating with corresponding kerosene consumption of 0·91 lb./lb. thrust/hr. Interesting features were the annular combustion chamber, low dry weight of 2,500 lb. and small frontal area of 6·8 sq. ft. Flights were made in an experimental Meteor but speeds were not disclosed. The American Curtiss-Wright corporation acquired manufacturing licence for Sapphires. The Rolls-Royce Avon, in production for Canberra bombers, was extensively flight-tested, but no thrust higher than 6,000 lb.m.s.l.s.t. was published.



The Armstrong-Siddeley Sapphire turbo-jet engine shown by H. T. Chapman, director and general manager (right), and W. H. Lindsey, deputy chief engineer.

Armstrong-Siddeley revealed that Viper (1,500 lb.m.s.l.s.t.) was under development, but no details were released.

Several designs of annular combustion chambers, which would occupy less space than the conventional multi-chamber tubular type, were under test. Exhaust reheat experiments continued and de Havillands exhibited a variable-area

jet pipe nozzle designed for Ghost exhaust reheat tests.

The British Shipbuilding Research association made novel use of jet propulsion by mounting four Derwent 5 turbo-jets on the converted hull of the disused Clyde steamer " Lucy Ashton " (205 tons). This was not intended to advance the application of jet propulsion to marine craft, but for the first time accurate thrust measurements enabled full-scale water resistance to be recorded for comparison with predictions from model tests in experimental tanks.

Jet Propulsion Rocket Motors. For jet propulsion to assist take-off, the de Havilland Sprite cold rocket motor (one in which hydrogen peroxide burns at about 500°C. chamber temperature) made experimental runs. Designed to give 5,000 lb. thrust for 12 sec., it weighed 925 lb. charged and 350 lb. empty. The R.A.E.-Fairey Beta hot rocket motor (one in which hydrogen peroxide supplies oxygen for combustion of other fuels at about 2,000°C.) was displayed; and Armstrong-Siddeley announced initial flights of their Snarler liquid-fuel rocket motor.

Turbo-Props. Britain's most powerful single turbo-prop, the Python (4,550 max. equivalent h.p.) continued in production for Wyvern T.F.2. The Mamba, developed up to 1,475 m.e.h.p., accumulated flying hours in several civil prototypes and experimental aircraft. The Double Mamba powered the Fairey 17 and the Blackburn Y.B.I., anti-submarine prototypes which could use both units for improved take-off and combat but could cruise more economically on one unit. The Dart was developed up to 1,540 m.e.h.p. for the Viscount 700 air liner. The Theseus (2,500 m.e.h.p.), with 350 hr. overhaul life, powered the Hermes 5 while extended flight-testing of the single Proteus (3,500 m.e.h.p.) gave data for the refinement of the coupled Proteus (7,000 m.e.h.p.) which continued bench tests prior to ground running installed entirely within a dummy wing.

Power-generating, Locomotive and Marine Gas Turbines. Installation of the John Brown 12,500 kw. closed cycle plant progressed at Dundee. Several advantageous modifications were incorporated in the 700 kw. closed cycle waste-heat plant under construction by this firm who also commenced design of a 1,000 b.h.p. experimental coal-fired set intended for 100,000 hr. life. Their 500 b.h.p. experimental unit completed 1,300 hr. test running subsequent to conversion to a closed cycle. British Thomson-Houston manufactured components for two centrifugal compressor open cycle 2,500 kw. gas turbine-alternator sets for Nairobi. Designed to burn furnace oil they were expected to attain 20% thermal efficiency.

Brush had in design a 2,500 kw. open cycle peak load set comprising a 14-stage, 4·15:1 ratio axial compressor driven at 6,275 r.p.m. by a two-stage turbine. The alternator was direct coupled to a two-stage power turbine rotated at 3,000 r.p.m. When burning gas oil, the estimated thermal efficiency at full load was 17%, no heat exchanger being incorporated. Included in trials of Ruston and Hornsby's 1,070 b.h.p. open cycle set was a 1,000-hr. endurance run feeding 750 kw. to the national grid. Burning gas oil, thermal efficiency conformed closely to predictions; 23% being measured at full load. A series of tests burning progressively heavier fuel oils was started.

Fraser and Chalmers had under construction an experimental open cycle set for the National Gas Turbine establishment where the 10,000 kw. plant by C. A. Parsons, when installed, would supply both power and district heating. Metropolitan-Vickers, whose 2,000 kw. experimental set ran comparative tests of a range of residual oil fuels, continued construction of the 15,000 kw. plant for the British Electricity authority. The 1,750 kw. continuous load set for Shell and the 2,500 kw. stand-by set for the Metropolitan Water board were also in manufacture. These two closely similar layouts were designed for overall thermal efficiences of 15% and 16·5% respectively. Metro-Vick bench-tested their 3,520 b.h.p. turbine for the first British-built gas turbine locomotive which would provide 2,800 b.h.p. for traction.

Track testing of the world's first gas turbine propelled automobile, the experimental Rover, aroused wide interest. The rear positioned 100 b.h.p., 40,000 r.p.m. open cycle engine comprised a single-stage, single-sided centrifugal compressor driven by a 8 in. diam. single-stage turbine fed by two tubular combustion chambers burning kerosene. A separate two-stage power turbine was positively coupled to a conventional rear axle through a single-reduction helical gear, no change speed gears or clutch being necessary. A reverse gear was incorporated. From standstill, acceleration to 60 m.p.h. took 14 sec. and 85 m.p.h. was exceeded. Fuel consumption was estimated to be 6 mi. per gal. but, with heat exchanger, 12 mi. per gal. was expected.

Rovers also demonstrated a 100/120 b.h.p. marine gas turbine, the T.8, in a twin-engined 60 ft. launch. Metro-Vick had under development a marine unit larger than the 2,500 s.h.p./F.2 type which completed sea trials and Rolls-Royce proceeded with development of the 6,000 s.h.p. set for installation in the gun-boat " Grey Goose." Components for the 1,200 s.h.p. set for trial in the tanker " Auris " were tested by British Thomson-Houston and English Electric continued experimental work connected with their 6,600 s.h.p. set for comparative trials in one of the " Captains " class frigates of the Royal Navy.

Pametrada bench-tested the 3,500 h.p. open cycle marine set designed by the association and manufactured by member firms. Intended for 100,000 hr. life, with renewal at 10,000 hr. of a few components with critical life/temperature/stress characteristics, the set comprised two intercooled axial compressors of 5·7:1 total pressure ratio which fed a single combustion chamber through a tubular heat exchanger. The compressors were driven by a high-pressure turbine, which at full load received gas at 1,200°F., after which two parallel combustion chambers restored this turbine inlet temperature before entry to the power turbine. Two fluid couplings in the transmission gave ahead or astern running through high-efficiency double reduction gearing.

The gas turbo-generator set, of 1,000 kw. continuous rating, constructed for the Admiralty by W. H. Allen for trials under service conditions, ran initial tests. A 4:1 ratio axial compressor delivered, through an annular heat exchanger, to a two-stage turbine. A power turbine drove the generator through epicyclic reduction gearing. Designed for operation in both temperate and tropical climates and for an operating life of 50,000 hr., with 5,000 hr. overhaul periods, the estimated diesel fuel consumption at full load was 1·07 lb./kw./hr.

Gas Turbine Fuels. Kerosene remained the normal aviation fuel but alternative petroleum fuels were tested. For industrial plants, endurance tests were run on heavy oil fuels and the possibilities of fuels other than oil were explored. The government's Fuel Research centre and the British Coal Utilization Research association experimented with chambers to burn low grade coal. C. A. Parsons converted their 500 b.h.p. pioneer plant to use pulverized coal and English Electric adapted a set of about 2,700 b.h.p. to burn this fuel by direct internal combustion. Two-stage combustion, comprising gasification of coal in a gas producer and internal combustion of the resulting gas, was a feature of an open cycle 2,000 kw. plant in design by Metro-Vick. For peat-burning experiments, Ruston and Hornsby had under construction a variant of their 750 kw. set. John Brown had a peat-burning air heater in manufacture and a coal-burning version in design. The practicability of using the firedamp (methane) in mine upcast air was under investigation and English Electric prepared a scheme for a firedamp-burning gas turbine for the Ministry of Fuel and Power. In collaboration, the Admiralty Engineering laboratory and the National Gas Turbine

establishment examined a wide range of heavy oils for marine fuels.

Materials. Improved heat-resistant materials were investigated, including "ceramels" (sintered combinations of ceramics and metals) and porous materials suitable for sweat cooling. Nimonic 90, a new high-temperature creep resistant nickel-chromium alloy which could withstand operating temperatures of up to 870°C. without marked deterioration of its properties, gave turbine blades a load-carrying capacity 10% higher than similar blades of Nimonic 80A. The characteristics and properties of possible non-ferrous materials for axial compressor blades and heat exchanger tubes were investigated by the British Non-Ferrous Metals Research association.

Commonwealth. Avro (Canada) released brief particulars of the Orenda turbo-jet which was under development. With direct entry axial compressor, six large cylindrical combustion chambers and a conventional single stage turbine, this engine (reported to give 6,500 lb.m.s.l.s.t.) was intended for the Avro (Canada) C.F. 100 Canuck twin-engined fighter that at first flew with Avons. The Avro (Canada) jet airliner with four Derwent 5 turbo-jets made proving flights. The National Research council continued cold climate tests of aero gas turbines, in co-operation with the British Ministry of Supply and, recognizing that innate ease of starting and enhanced performance in cold atmospheres made gas turbines particularly suitable for Canadian use, the council collaborated with McGill university in the design of a 200 b.h.p. automobile unit and a locomotive engine. In Australia, initial batches of Nene turbo-jets were produced and manufacture of the Tay was planned. An Australian-designed aircraft, built by the government's factory in Melbourne, made initial flights with an Armstrong-Siddeley Adder turbo-jet of 1,100 m.s.l.s.t.

(R. H. SL.)

Europe. France and Sweden made progress with aircraft gas turbine engines and Italy and Belgium built engines of British design under licence. The Société Rateau in France was developing a 16-stage axial turbo-jet of 8,820 lb. thrust, with arrangement for afterburning. The 240 lb. thrust turbo-jet engine of Turboméca passed a 150 hr. type test; this firm was developing other engines in this low power class. In Sweden, the axial flow type of Svenska Turbinfabriks Aktiebolaget Ljungstrom (S.T.A.L.) was stated to be of 3,200 lb. thrust. A small engine incorporating an inward flow radial turbine was exhibited in Switzerland.

In the marine, locomotive and industrial fields, news of progress came from France, where a Gas Turbine Technical association was set up with laboratories at the St. Denis power station, Paris. Use was made of the free-piston type of gas generator for power station turbines. Two of 1,400 kw. were under construction by Alsthom for the Reims power station, and one of 1,700 kw. was under erection by Société Industrielle Générale de Mécanique Appliquée. A 1,000 b.h.p. locomotive unit of the free piston type was under construction in the factory of Régie Nationale des Usines Renault.

Compagnie Electro-Mécanique was reported to be testing an experimental turbine with hollow cooled blading, and Société Rateau were constructing a 3,900 s.h.p. turbine for installation in a Liberty ship. Société de Construction Mécano-Thermique were building a 15,000 kw. power station set on the Mercier equi-pressure combined gas-steam cycle for Éléctricité de France. Creusot-Schneider were working on a 5,000 kw. open cycle unit. Turboméca were constructing a 3,500 h.p. power unit for naval use.

In Sweden the S.T.A.L. company was reported to have a 6,000 b.h.p. engine under construction and A. B. de Lavals Ångoturbin were continuing with an experimental combined gas and steam gas turbine for marine use. An account was published of work at the Elsinore Shipbuilding and Engineering company in Denmark on the high pressure portion of a 3,000 b.h.p. marine turbine. In the Netherlands, Gasturbine Maatschappij N.V. were constructing a 2,000 kw. gas turbine to burn natural gas. The first news of a gas turbine unit in Spain was from the Centro de Estudios Técnicos de Automoción, Madrid, of a design of 170 b.h.p., including heat exchanger, for a road transport vehicle.

In Switzerland a number of turbines were under construction in the works of Brown Boveri, particularly a 5,400 kw. set for a Luxembourg steel firm to burn blast furnace gas. Two 4,700 kw. turbines were under construction for pumping plant for the Anglo-Iranian Oil company. Work was continued on the 12,500 kw. closed cycle Escher Wyss plant for St. Denis, Paris, and Oerlikon were continuing experimental running on their 1,000 kw. open cycle centrifugal plant. Preliminary runs took place during the year on the 20,000 kw. Sulzer semi-closed cycle turbine installed as stand-by plant for the Weinfelden station of Nordöstschweizerische Kraftwerke. Saurer continued experiments with a small gas turbine rig of about 200 b.h.p.

United States. Details were published of aircraft auxiliary turbines and similar multi-purpose engines of low power. Airesearch Manufacturing company developed a 65 s.h.p. compressor unit weighing 100 lb. with reduction gearing for a small pneumatic turbine to start jet engines and an 85 s.h.p. engine for a 19 kw. generator, both for the Navy. Boeing demonstrated a centrifugal 170 s.h.p. engine for multi-purpose use including vehicle drive, and a 190 lb. thrust jet version of the same engine. Solar Aircraft company built an axial 105 s.h.p. unit.

Allison obtained 9,700 lb. thrust without afterburning in a modified J35 turbo-jet. Several firms were working on projects of 8,000 to 10,000 lb. thrust notably the Turbodyne corporation and Wright Aeronautical. Curtiss-Wright made arrangements to manufacture the British Armstrong-Siddeley Sapphire 7,500 lb. thrust engine under licence and Pratt and Whitney continued to produce the Rolls-Royce Tay in addition to the Turbo-Wasp.

Extensive research was continued on gas turbine problems. Particular attention was paid to heat-resisting materials, alloys of titanium and turbine blade cooling. The use of the inward flow turbine enabling smaller sized units to be built efficiently was developed by several firms. Experimental work on coal-burning was continued; a Houdry plant was successfully fired with pulverized coal at Dunkirk, New York. Results of experiments on a small pressurized gas producer at Battelle Memorial institute, Columbus, Ohio, were published. A coal-fired gas turbine of 4,100 b.h.p. was under construction by Allis Chalmers for one of the two experimental coal-fired locomotives sponsored by the locomotive development committee of Bituminous Coal Research, Inc. The Elliott company were building the other turbine and an oil-fired loco-turbine for the Santa Fé railway. The General Electric locomotive was in freight service on the Union Pacific railway.

The de Laval Steam Turbine company were testing a 7,500 h.p. unit with three Birmann type (radial flow) turbine stages and two stages of reheat. They were also building a simplified 3,000 b.h.p. unit. Frederick Flader were designing a 5,500 b.h.p. plant of 30% design efficiency, to be built by Clark Bros. for pumping on the Tennessee gas transmission line. The first unit to produce commercial power was a 3,500 kw. gas-fired set by General Electric in the Huey station of the Oklahoma General Electric company. Two identical oil-burning sets were ordered; in addition three 5,000 kw. sets of 28% efficiency were under construction, two gas-burning and one oil-burning.

The Navy sponsored projects of free and crank-connected piston generators in the Baldwin locomotive works and with the Lima-Hamilton corporation. The latter was constructing

an electric locomotive with free piston gas generator turbine. The Westinghouse Electric company was supplying two locoturbines exactly similar to the 2,000 b.h.p. single-shaft simple cycle plant unit which was connected to a pumping unit of the Mississippi River Fuel corporation. In the U.S. all units except free piston generators were open cycle type.

Japan. A 2,200 b.h.p. turbine was tested, and a 1,500 b.h.p. turbine was under construction. (*See* AIRCRAFT MANUFACTURE; AIR FORCES OF THE WORLD; AVIATION, CIVIL.)

(C. G. C.)

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JEWELS: *see:* PRECIOUS STONES.

JEWRY, WORLD. The future of German Jewry was debated during 1950. Most Jewish D.P.s in Germany had left. The *Wochenblatt*, official publication of the Jewish D.P.s in the British zone, called on Aug. 18 on all remaining Jews to leave, insisting that there had been no decline in anti-Jewish feeling; and that Jewish cemeteries were again being desecrated. Konrad Adenauer, federal chancellor, in a message for the Jewish New Year (Sept. 1950) assured the Jews that his government would not tolerate religious discrimination. About 28,000 Jews were left in Germany and most of them were expected to remain. Religious and social institutions had been re-established. Yet Rabbi Stephen S. Schwarzschild, who went back from the United States to serve as liberal rabbi in Berlin, left in June, after two years service to what was the largest Jewish community in Germany, numbering about 7,000, and declared that he would not set foot on German soil again. He was succeeded by Rabbi Nathan Levinson, also a former German resident who emigrated to the U.S. New synagogues were consecrated in Germany in 1950, among them one in Frankfurt, on Sept. 6, accommodating 1,000 worshippers, and one in Dresden, in the Soviet zone, in July.

The future of Judaism in the U.S.S.R. (with an estimated Jewish population of 1,980,000) and the Soviet-controlled countries caused anxiety. The *Jewish Chronicle* (London) expressed fear that Jewish communal and cultural life in the U.S.S.R. was a thing of the past. Yet it reported that rabbis and spiritual heads of several Soviet Jewish communities had written to the Israeli minister of religious affairs to ask for *ethrogim* to be sent to them for the Feast of Tabernacles.

In Poland (90,000 Jews) there was a movement for Communist indoctrination in the Jewish schools. The posts of Jewish chaplains in the Polish forces were abolished. Yet the Polish government offered in August Zł. 20 million towards rebuilding the synagogue in the Warsaw suburb Praga, the balance of Zł. 10 million to be provided by the Polish Jews.

In Czechoslovakia (40,000 Jews) it was reported that there were 35 synagogues in Prague, but the attendance did not warrant opening more than three and was not more than about 50 each at these. The chief rabbi of Czechoslovakia, Gustav Sicher, was among the leaders of religious denominations who in March took the oath of loyalty to the state.

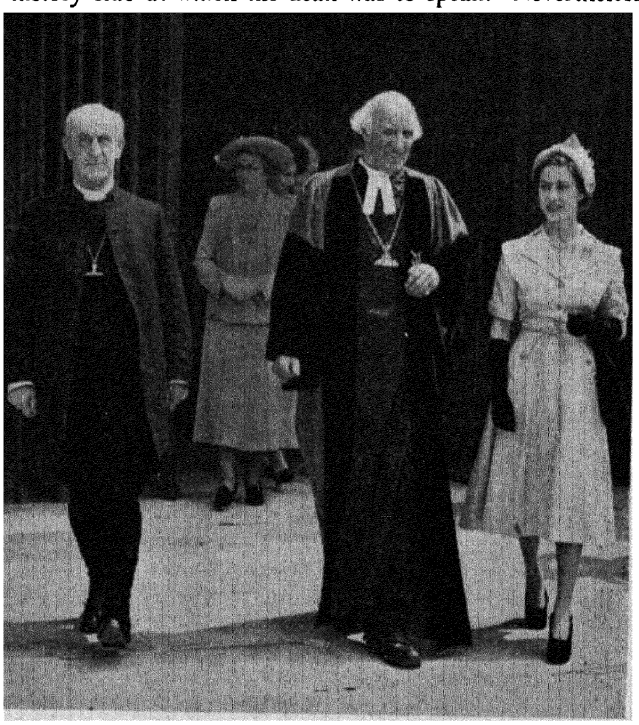
In Italy, with a Jewish population of about 50,000, Jewish life had become stabilized. There were three Jewish secondary schools (Milan, Turin and Rome), and seven elementary schools (Florence, Genoa, Leghorn, Milan, Rome and Venice, as well as Trieste)—all enjoying the same rights as the state schools.

The Jewish communities of France (about 250,000) Belgium (35,000) and Holland (about 30,000) developed their religion and culture. The chief rabbi of France, Isaac Schwartz, said in June that there was a notable spiritual revival in French Jewry, especially among the young.

At the Conference of Jewish Communities in the British Commonwealth held in London in July, Israel Brodie, chief rabbi, urged the importance of Jews' college in London as the training centre of rabbis and teachers not only for 400,000 Jews of Great Britain but also for some 365,000 in other Commonwealth countries.

American Jewry (about 5 million) made strides in the field of education. There were 130 Jewish day schools in the U.S. with an attendance of 18,000 children. At Yeshiva university in New York 90% of its 2,000 students were American-born. It was estimated that 10% of American Jewry was Reformist, 15% Conservative and the remainder was either Orthodox or took no part in religious life. (J. LWH.)

JOHNSON, HEWLETT, Anglican priest (b. Kersall, Manchester, Jan. 25, 1874), went to King Edward's school, Macclesfield, read geology and hydraulic engineering at Manchester university and theology at Wadham college, Oxford, and after a period of parochial work was dean of Manchester, 1924-31. In the latter year he became dean of Canterbury. He was founder and proprietor of the *Interpreter*, which he edited from 1905 to 1924; his extreme left-wing views were stated in *The Socialist Sixth of the World*, which up to 1950 had had 22 editions and had been translated into some 24 languages, and in *Soviet Strength* and *Soviet Success* (1947). In March 1950 the U.S. State Department refused visas to Hewlett Johnson and 11 other delegates from the World Congress of Partisans of Peace. In April he went to Australia to attend the World Peace congress in Melbourne and to visit Sydney and other centres. Sydney city council refused to allow the use of the town hall for a meeting which he was to address. The lord mayor of Newcastle, New South Wales, announced that he would not give the dean a civic reception and the vice chancellor of Sydney university refused to attend a meeting of the university history club at which the dean was to speak. Nevertheless,



Hewlett Johnson, Dean of Canterbury, leaving Canterbury Cathedral with Princess Margaret, May 31, 1950. On the left is the Archbishop of Canterbury.

reports stated that Hewlett Johnson was often warmly greeted by large crowds, although he fared less well on a visit to Canada in May where he attended a meeting of the Canadian peace council and visited various towns; there were hostile demonstrations during his meetings at Hamilton, Ontario, and Calgary, Alberta. At the end of May the dean welcomed Princess Margaret (*q.v.*) when she visited Canterbury cathedral. In November, at the World Peace congress in Warsaw, he was elected a member of the World Council of Peace.

JOHNSTONE, WILLIAM RAPHAEL, Australian jockey (b. Newcastle, New South Wales, April 13, 1905), began his riding career in 1921 when, a 16-year-old apprentice, he established the remarkable feat of finishing at the head of the jockeys' list in the Sydney area. In 1931 he went to India where he won most of the principal races. There followed a successful spell in France. Then came a contract to ride for Lord Glanely in England. "Rae" became the centre of the biggest controversy of the 1934 racing season when beaten into third place in the Derby on Lord Glanely's favourite Colombo. Widely criticized for his riding, the dapper little "Beau Brummel" of the jockeys wisecracked "If Colombo had been ridden by a jockey he'd have won by ten minutes." The sequel was the termination of his contract. There followed "one of the happiest memories of my life," a dinner given in his honour by all the jockeys in England on the eve of his return to France. Johnstone returned to England to ride the Thousand Guineas winner, Mesa, in 1935. He achieved the highlight in his career when he won the English, French and Irish Derbys in 1948. He was appointed first jockey to Marcel Boussac in 1950 and rode the winners of the English and French Derbys as well as the English St. Leger, the English and French Thousand Guineas and the English and Irish Oaks for Boussac in that year. Johnstone's outstanding riding characteristic has been his superb judgment of pace. This frequently has enabled him to delay his challenge until the vital moment and win in the last few strides; he was nicknamed "The Crocodile" by French racegoers because of this habit of gobbling up the opposition. Bi-lingual and married to a Frenchwoman, "Rae" diets strictly during the season but relaxes while cruising home to Australia *via* the U.S. during the winter months. (P. O'S.)

JORDAN. Independent Arab kingdom of the middle east bounded W. by Israel, N. by Syria, E. by Iraq and S.E. and S. by Saudi Arabia. Area (excluding Arab Palestine): 34,750 sq.mi. Pop. (no census ever taken, 1947 est.): 400,000. Capital: Amman (pop., 60,000). Arab Palestine, area *c.* 2,350 sq.mi., pop. about one million, was officially incorporated into Jordan on April 24, 1950. Language (former Transjordan): Arabic 97%, Circassian 2·5%. Religion (former Transjordan): Moslem 91% (chiefly Sunni); Christian 8·5% (chiefly Arab-speaking Greek Orthodox). King, Abdullah Ibn Hussein; prime ministers in 1950: Tawfik Pasha Abulhuda (until April 13), Said Pasha el Mufti and (from Dec. 4) Samir Pasha el Rifai.

History. During 1950 the policy of the Jordan government regarding Palestine was seriously at variance with that of the Arab league (*q.v.*). On April 6 Jordan opposed the United Nations' plan for the internationalization of Jerusalem which the other member states approved subject to reservations. Again on April 13 the government declared that their policy was to annex Arab Palestine subject to the approval of the Jordan parliament, whereas the other member states confirmed that the entry of Arab armies into Palestine in 1948 was a temporary measure implying no suggestion of occupation or partition. Previously, on March 25, King Abdullah had informed the press that he had learned that the Arab league had invited the "so-called government of all Palestine" (led by Mohammed Amin el Husseini, the exiled mufti of Jerusalem) to attend its meetings and that the league would oppose any suggestions that Arab Palestine should accede to Jordan. The government of Jordan, the king said, strongly objected to both these gestures.

Elections for a Jordan parliament to represent not only the former Transjordan but also Arab Palestine were held on both sides of the Jordan on April 11, and on April 13 Said Pasha el Mufti formed a new cabinet. When the new parliament met on April 24 King Abdullah, in his speech from the throne announcing the annexation of Arab Palestine, said that the situation now existing between Jordan and Arab Palestine made unification imperative; but that the annexation would not prejudice the final settlement of Palestine's "just case within the spheres of its national aspirations, of international justice and inter-Arab co-operation." This declaration was approved by the government; but on May 10 at an extraordinary session of the league, Jordan's action was opposed by Egypt, Saudi Arabia, Syria and the Lebanon, who proposed Jordan's expulsion. This motion was not carried; and on May 31 the Jordan cabinet announced that it considered the unification of both sides of the Jordan as not liable to further discussion, though it did not prejudice a final settlement of the Palestine problem which remained one of the aims of Jordan's policy. At a subsequent league meeting on June 12, the six member states (Jordan being unrepresented) passed a revised resolution that Jordan must treat the area of Arab Palestine as "trust property" until Palestine was "finally liberated."

Meantime on April 27 Kenneth Younger, the British minister of state, announced in the House of Commons that, pending the final determination of the status of Arab Palestine, the British government was unable to recognize Jordan sovereignty over any part of it; but they did recognize formally the *de facto* union of the kingdom of Jordan with the part of Palestine under its government and control, and that the Anglo-Jordan treaty of 1948 applied to that part of Palestine unless or until the United Nations had established effective authority there. He concluded with an assurance that the British government had no intention of requesting the establishment of British military bases in peacetime in the remnant of Arab Palestine. Later, on July 1, the British Treasury and the Jordan Currency board announced the replacement of the old Palestinian currency by a new Jordan currency and that Jordan was re-entering the sterling area.

On Oct. 12 Said Pasha el Mufti reformed his cabinet and announced that his government's foreign policy was to co-operate with and remain in the Arab league. He resigned on Dec. 3 and a new cabinet was formed by Samir Pasha el Rifai, a former prime minister.

During the year the relations between the Jordan and Israeli governments remained unchanged, as did the armistice frontiers, including the bisection of Jerusalem (*q.v.*). During the second half of the year isolated Jordan-Israeli frontier clashes produced official complaints to the United Nations from both sides.

In the economic field the government issued in June details of a five-year land development plan for Bedouin settlement and two schemes for the exploitation of the phosphate and cement industries. Negotiations also took place with the Arab American Oil company arising from the laying of the Sidon pipeline across Jordan territory, the Jordan government asking that 200,000 tons of oil should be offloaded yearly in Jordan where the government proposed to erect a refinery for local needs. (O. Tw.)

Education. Schools (1948): government 89, others 86, total pupils 15,201, total teachers 361.

Agriculture. Main crops ('000 metric tons, 1947; 1948 in brackets): wheat 100 (139); barley 8 (41); lentils 7 (8); kersennah 3 (9); horse

beans 0·2 (9); millet 4 (9); tobacco 0·01 (0·12). Livestock ('000 head, 1948): goats 280; sheep 180; cattle 59; donkeys 25; horses 5·5; camels 7; mules 2·5.

Foreign Trade. ('000 dinars, 1949) imports 13,116; exports 1,053; re-exports 2,353. Main sources of imports (1949): U.K. 20·7%; Syria 18·5%; Iraq 8·3%. Main destinations of exports (1949): Israel 69%; Syria 28%. Principal imports (1949): cotton piece-goods 9·9%; sugar 8·1%; cement 3·4%; rice 3·3%. Principal exports (1949): wheat 30%; barley 18%; fresh vegetables 9%; lentils 5%.

Transport and Communications. Roads (1948) 1,470 mi. Licensed motor vehicles (Dec. 1949): cars 2,021; commercial 1,646. Railways (1948) 281 mi.

Finance and Banking. Budget ('000 dinars): (1949-50 est.) revenue 2,251, expenditure 2,316; (1950-51 est.) balanced at 2,344. Monetary unit: Jordan *dinar* at par with the pound sterling and with an exchange rate of 0·357 dinars to the U.S. dollar.

See Philip P. Graves, ed. *Memoirs of King Abdullah of Transjordan* (London 1950).

JUDICIARY, BRITISH. The outstanding feature of English judicial history in 1950 was the enactment of the High Court and County Court Judges act, providing for an increase of the number of *puisne* judges of the high court from 33 to 39, and of the number of county court judges from 60 to 65. These increases—to which effect had not been given in full at Dec. 31, 1950, the power to increase the number being permissive, not mandatory—were necessitated by a combination of factors, among them the pressure of work on the circuits, which the appointment of temporary commissioners had not solved altogether satisfactorily; and the increasing desire among litigants and their advisers to have fixed dates for the trial of the causes in which they were concerned, preferring the risk of some waste of judicial time through settlements or the illness of witnesses to the certainty of the waste of time and money for all others concerned that the alternative method involved.

Of the personal changes the most important was the retirement because of ill-health of Lord Greene who had in the previous year exchanged the position of master of the rolls for that of a lord of appeal in ordinary. Thus ended the active legal career of one of the most distinguished lawyers of the present century. His place in the House of Lords was taken by Lord Justice Tucker who had for some time been presiding in one of the appeal courts. Mr. Justice Birkett, a King's Bench judge who was one of the judges to try the leading German war criminals at Nuremberg, was promoted to the Court of Appeal. Sir William McNair, an eminent commercial lawyer, took the place of Lord Justice Birkett, as he now became, in the King's Bench division.

Among the other judicial appointments of the year were those of Mr. Justice Parker, previously common law junior counsel to the Treasury; Mr. Justice Gorman, a practitioner on the northern circuit, and Mr. Justice Collingwood, a county court judge who had done distinguished work as a judge advocate and one of the several county court judges elevated to the High Court bench in the last few years; Mr. Justice Barry and Mr. Justice Donovan, the latter a specialist on income tax and a former member of parliament. On Mr. Justice Collingwood's appointment to the Probate, Divorce and Admiralty division Mr. Justice Ormerod, another former county court judge, was transferred from that division to the King's Bench. (W. T. Ws.)

JUDICIARY, U.S. The Supreme Court disposed of 1,308 cases during the 1949 term, 126 less than in the 1948 term, and there were but 87 signed majority opinions rendered compared with 114 in the previous term. The small number of cases decided by one vote (6) and the number of dissenting opinions (54) were in striking contrast to the division within the court during preceding terms. At the previous term there had been 35 five-to-four opinions and 90 dissenting opinions.

The United States Supreme Court was composed in 1950 of the following members (dates indicate the year the appointment was confirmed by the Senate): chief justice, Fred M. Vinson (1946); associate justices, Hugo L. Black (1937), Stanley F. Reed (1938), Felix Frankfurter (1939), William O. Douglas (1939), Robert H. Jackson (1941), Harold H. Burton (1945), Tom C. Clark (1949) and Sherman Minton (1949). (H. B. Wy.)

JUGOSLAVIA: *see* YUGOSLAVIA.

JUTE. The Indian jute industry was dependent on Pakistan for its best raw jute. India's devaluation led to exchange problems which made it very difficult for it to obtain supplies from Pakistan which had not devalued. Another anxiety was that jute goods had been losing ground, as packaging materials, to competitive fibres and other substitutes. Therefore to protect the industry the Indian government imposed maximum prices for both raw jute and manufactured jute goods; further, in order that the state should reap the advantages of devaluation when exporting, the government raised the export duty at the beginning of 1950.

These steps, however, helped little for it became apparent that a change was taking place in the channels through which jute manufactures were being exported. Shippers who had formerly handled this business found themselves unable to secure enough jute goods. On the other hand, export departments connected with the managing agency houses, which had jute mills under their control, were exporting a much larger quantity: this resulted in scarcity and rising prices in consuming countries. Although shipments from India had to be made at controlled prices, some countries, particularly those of North America, in which there were no controls, were re-distributing the goods at higher profits; and it became evident that exporters in Calcutta were sharing in these profits. The war in Korea caused prices to rise still further in the U.S., and it was alleged that a large proportion of the margin between Indian and U.S. prices was getting into the hands of Indian nationals. Because of the attraction of the dollar market other countries were being prevented from obtaining their requirements.

Therefore the Indian government requisitioned all hessian cloth and bags in the mills' possession or to be manufactured up to the end of September, and made all contracts held by shippers subject to examination. Control of destination was extended to October, but protest from the U.S. caused it to be abandoned later. Instead the Indian government raised the export duty on hessian from Rs. 350 a ton to Rs. 1,500 a ton and on sacking from Rs. 50 to Rs. 150 a ton. Though U.S. reaction to this ruling was not clear then, it was thought that the U.S. had taken it in its stride; but the duty caused consumers in soft currency countries some concern.

At the beginning of 1950 mills were working 42½ hr. a week, with 12½% of the machinery idle. The Indian Jute Mills association therefore began talks with the Pakistan Jute board for the supply of Pakistan raw jute at fixed prices against the supply of jute goods. In April 1950 the Pakistan Jute board agreed to supply 800,000 bales of jute against 20,000 tons of jute goods, deliveries to be made before July 15, 1950. Pakistan deliveries fell behind and were not completed until the end of Sept. 1950.

From July 1949 to June 1950 the mills reporting to the Indian Jute Mills association consumed 4,916,000 bales (one bale=400 lb.), compared with 6,071,000 bales in the previous 12 months. Consumption in the year July 1950 to June 1951, on the basis of the existing 42½-hr. week, was estimated at 5,280,000 bales, based on the official estimate of the current Indian crop of raw jute at 4,460,000 bales.

Indian jute production declined in 1949-50 by no more than 215,400 tons, as compared with the 1948-49 figure, and exports were down by only 120,801 tons, the difference being

made up by reductions in mill stocks. The value of manufactures exported during 1949-50 was 27·1% of the total value of India's exports of all kinds.

Prices for raw jute to jute spinners in the United Kingdom remained unchanged in 1950, as did the maximum prices fixed by the Jute control for jute yarns and cloth. However, the greatly enhanced prices in India caused by the increase in the export duty on raw jute and jute manufactures caused the Jute control to revise their scheduled maximum prices and bring them into line with those ruling in other markets. The price of raw jute to United Kingdom spinners was raised by the control by £49 10*s.* a ton as from Jan. 3, 1951, bringing the price to £170 a ton, as compared with approximately £18 a ton in 1938. (*See* also HEMP.) (G. Hs.)

JUVENILE DELINQUENCY. The 1949 criminal statistics showed a falling off in the number of indictable offences proved against children and young persons as compared with 1948. The following were the relevant figures:

	Under 14	14-17	Total
1938	15,559	12,557	28,116
1948	28,715	16,991	45,706
1949	24,872	15,054	39,926

But though the total number of all offences for 1949 showed a notable decrease compared with 1948 there were more young offenders between 8 and 13.

The statistics analysed various types of offences under age groups. The most significant of these was "breaking and entering":

	Under 14	14-17	Total
1938	4,006	2,761	6,767
1948	7,696	4,878	12,574
1949	6,385	3,867	10,252

There was also a remarkable increase in 1949 of the offence of "receiving" in the under 14 age group. In 1938 there were 249 offences of this kind; in 1948, 504; and in 1949, 620. A number of charges of receiving were brought against small boys to whom their school friends had distributed small amounts of largesse after raids on warehouses; although there was no doubt of guilty knowledge by the offender, neither they nor their parents appreciated the gravity of the charge. Much was hoped from the provision of attendance centres as envisaged in the 1948 act. Only three of these, which children attended on their Saturday holidays, had been opened by the end of 1950. Two international conferences, attended by delegates from many countries, were held—one at Liége for children's judges and one on penology at The Hague.

In Great Britain, the Home Office issued (July, 1950) a paper to the House of Lords reviewing the action taken by local authorities in England and Wales, following the conference called by the home secretary and the minister of education in April, 1949. Of the 145 local authorities in the country. 73 held local conferences and 15 had notified their intention of holding conferences. These 88 Authorities represented 75% of the population. In 58 areas committees composed of representative of the local services had been set up and many of these were still engaged in examining the local problem, collecting statistics and investigating different aspects of the subject; this was apparently the first enquiry into the cause and prevention of delinquency on a regional scale.

Early in the year much publicity had been given to crimes of violence committed by young people. This was linked with the provisions of the Criminal Justice act which abolished corporal punishment. The incidence of such crimes was, however, exaggerated. There were isolated examples of crimes of violence by young people in the 17 to 21 age group, but there was no evidence of an increase in the lower age group.

In Europe much publicity was given to The Hague conference's recommendations that the handling of juvenile delinquents should be entrusted to an authority composed of experts in legal, medical and educational matters or an authority which sought the advice of such experts before pronouncing judgment.

In Great Britain the need for a unified family welfare service was emphasized by much documentary evidence. It was significant, therefore, that the Liége conference spent a considerable time discussing the domestic relations courts which were being developed to deal with the family situation in the U.S. The year saw a slight swing in favour of tackling the problem by strengthening the family as well as by directing therapy at the child, and there was less evidence of the hardening of opinion against corrective treatment and research discernible in 1949.

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JUVENILE EMPLOYMENT: *see* YOUTH EMPLOYMENT.

KARACHI, capital of Pakistan. Pop.: (1941 census) 359,492; (1948 est.) 1,000,000.

Throughout the year Karachi continued to be the seat of both the central government and the provincial government of Sind. This was one of the reasons for the serious overcrowding which put a high premium on any kind of residential or office accommodation. The difficulties were aggravated by a continued influx of refugees from India. By the end of the year, as many as 150,000 were still living in tents or shacks in all open spaces in the city or were squatting in public buildings.

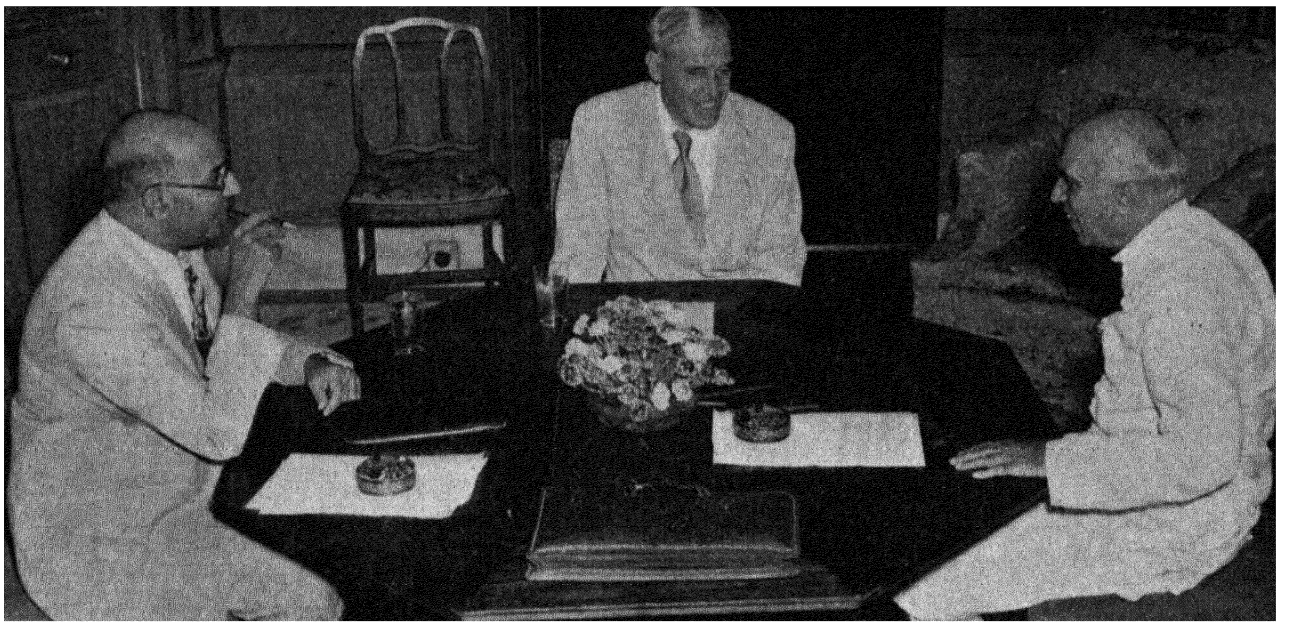
Schemes for the development of Greater Karachi, along the lines of a master plan prepared by the consulting engineers to the government, were to be executed by an Improvement trust, which was given statutory existence in May by the passing of an act introduced in the Constituent Assembly for the purpose. The trust would also tackle the problem of slum clearance. Meanwhile, a satellite town, named Nazimabad, was in process of construction for residential requirements.

Education in Karachi received the special attention of the central government, and, from the cultural point of view, the main event of the year was the passing of an act for establishing a national university in the capital. This would take the place of the Sind university, which was little more than an examining body and was always handicapped by meagre resources. The new university, which was expected to start functioning in 1951, was to take over the entire academic organization and control of the colleges in Karachi and, with its teaching departments and constituent colleges, would function as an integrated whole. Teaching and research would be organized by various faculties with the assistance of appropriate boards of studies. The university would also be residential.

A National museum was opened in Karachi in April. This would, amongst other things, give a comprehensive idea of the Indus civilization of 4,000 years ago. A scheme for establishing a national library was approved. (F. M. I.)

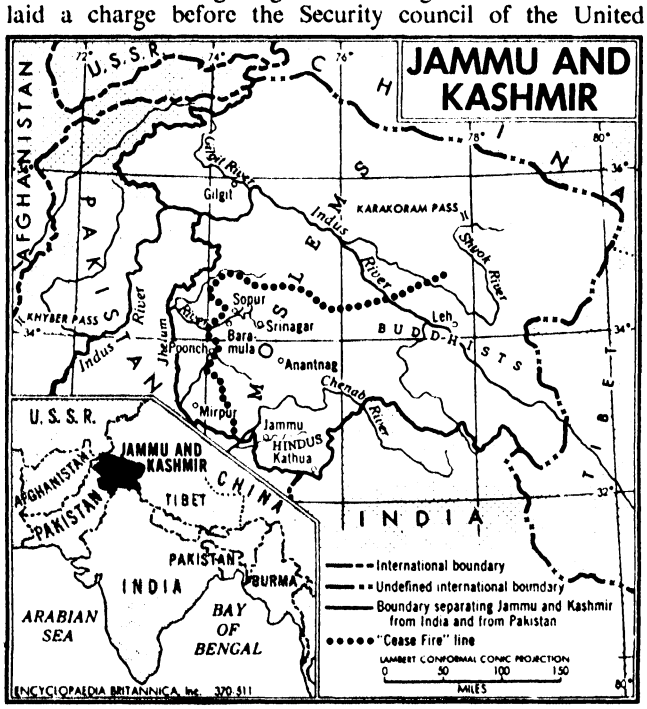
KASHMIR. Himalayan state in Indian sub-continent; bounded N.W., N.E. and E. by Afghanistan, Sinkiang province of China and Tibet respectively. Area (incl. Jammu and frontier districts): 84,471 sq.mi. Pop. (1941 census): 4,021,616. Ruler, Lieut. General Maharaja Sir Hari Singh.

History. The trouble in Kashmir originated in Aug. 1947.



The United Nations mediator for Kashmir, Sir Owen Dixon (centre), with Liaquat Ali Khan (left) and Jawaharlal Nehru, during a meeting in New Delhi, July 20, 1950.

The Maharaja, a Dogra Rajput, was highly unpopular with his subjects, 80% of whom were Moslems. Risings in favour of accession to Pakistan were savagely suppressed by the state troops, and this provided a convenient pretext to the lawless tribesmen of the North-West Frontier to proclaim a *jihad*, or holy war and invade the country in aid of their co-religionists. They met with little resistance and, after plundering Baramula and murdering many of the inhabitants, they advanced upon the capital, Srinagar. The Maharaja in his extremity applied for accession to India. His request was accepted by the governor general, Lord Mountbatten, and Indian troops, flown in, arrived just in time to save Srinagar from destruction. Shortly afterwards the Maharaja retired to Jammu, leaving the government in the hands of Sheikh Abdullah, a Moslem who favoured the Indian Congress. The Indian government asserted that the Maharaja had exercised his legal right in acceding and in Jan. 1948 it laid a charge before the Security council of the United Nations, complaining that Pakistan had aided and abetted the tribesmen in invading his territory. The Pakistan representative, Sir Zafrullah Khan, retorted with accusations of genocide against the Hindus and Sikhs, whom he charged with the wholesale murder of the Moslem inhabitants, while large numbers of others had been expelled from their homes. In April 1948, the Indian army had taken the offensive against the tribesmen and had advanced as far as Uri on the main Rawalpindi road. This compelled the Pakistan government to take up a defensive line in order to protect its frontier and stop the stream of refugees pouring into th ecountry, The Security council sent a five-power commission to conduct enquiries on the spot and after negotiations which lasted until the end of the year a "cease fire" agreement was arranged, by which each army was to hold the ground it occupied pending arrangements for mutual retirement; after that the wishes of the people were to be ascertained by a free and impartial plebiscite to be administered by a distinguished American officer, Admiral Chester W. Nimitz. Meanwhile, General A. McNaughton, chairman of the Security council, drew up plans for carrying out the demilitarization of Kashmir by the simultaneous withdrawal of the Indian and Pakistan forces in successive stages over a period of five months; but this broke down because the Indian government insisted on regarding the Azad, or free, Kashmir forces who had formed the backbone of the resistance movement as guerrillas and refused to evacuate its positions until after these had been disbanded. In Feb. 1950 General McNaughton was obliged to report to the council the failure of his efforts. The Security council refused to be discouraged by the failure of the commission to bring about a decision, and in April the improvement in relations between the two countries seemed to offer a fresh opportunity of breaking the deadlock. The commission was replaced by Sir Owen Dixon (*q.v.*), a judge of the Australian High Court and formerly ambassador to the U.S., who acted as mediator. Both India and Pakistan promised him their support, and on May 25 he left for New Delhi by air in order to consult the Indian government before proceeding to Karachi and from there to Kashmir. Sir Owen Dixon spent the next three months in conferences and negotiations which, unfortunately, proved as abortive as before. As neither state was ready with a constructive plan, he was obliged to offer a solution of his



own. This took the form of a limited plebiscite. Where the desires of the inhabitants were clearly known, as in Poonch, the territory should be partitioned in accordance with their wishes, due regard being paid to geographical and other considerations; but where they were in doubt, as in the Vale of Kashmir, a plebiscite should be held to ascertain them. Neither country was able to agree. Pakistan took its stand upon the United Nations resolution specifying an over-all plebiscite as the manner of settlement. India, on the other hand, claimed that Kashmir had legally acceded to the Indian union and that the Pakistan troops, as the aggressors, must be withdrawn before a plebiscite was conducted under the auspices of Sheikh Abdullah's government. As it was impossible to reconcile these widely divergent views, Sir Owen Dixon left India on Aug. 23 to report to the Security council. In his report he recommended that the council should renounce responsibility for a settlement and should inform India and Pakistan that they must come to an agreement between themselves. This caused great disappointment in Pakistan, which felt that it had been unfairly blamed for the action of the tribesmen in coming to the help of their co-religionists in Oct. 1947. (H. G. RN.)

KEKKONEN, URHO KALEVA, Finnish statesman (b. Pielavesi, Finland, Sept. 3, 1900), graduated at the University of Helsinki in 1928 and became a lawyer, having begun his association with politics when appointed counsellor to the Agrarian party in 1927. He was appointed administrative secretary in the Ministry of Agriculture (1932-36), was elected member of the central governing committee of the Agrarian party (1937-44) and became member of the *Eduskunta* (parliament) in 1936. Appointed minister of justice in the Kallio cabinet (1936), he next was minister of the interior in the Cajander cabinet (1937-39). During 1940-43 he was chief of the bureau for displaced persons. He was appointed minister of justice in the Paasikivi cabinet (Nov. 1944 - March 4, 1946). As leader of the Agrarians he was elected speaker of the parliament in July 1948. In the presidential election on Jan. 16-17, 1950, he received only 63 votes against 172 polled in favour of Juho Kusti Paasikivi and 65 accorded to Mauno Pekkala (pro-Communist). On March 17 he became prime minister forming a minority centre government. He paid an official visit to Moscow and was received by Joseph Stalin on June 13.

KELLY, SIR GERALD FESTUS, British painter (b. London, April 9, 1879), was educated at Eton and Trinity hall, Cambridge, and studied art in Paris. He was elected an A.R.A. in 1922 and a full academician in 1930. In 1945 he painted state portraits of King George VI and Queen Elizabeth, and was knighted. He became president of the Royal Academy in 1949 on the resignation of Sir Alfred J. Munnings. Speaking at the annual meeting of the Artists' General Benevolent institution in March, 1950, he said that there were too many art students and that he took "a very dim view" of the future of so many. In June Cambridge university conferred an honorary LL.D. upon him. As well as exhibiting portraits at the Academy, he showed at the Leicester galleries, London, in October 50 paintings dated from 1909 to 1939 and including portraits, still-lifes, landscapes and Burmese subjects. Sir Gerald Kelly's work is represented at the Tate gallery, London, and in many municipal and overseas collections.

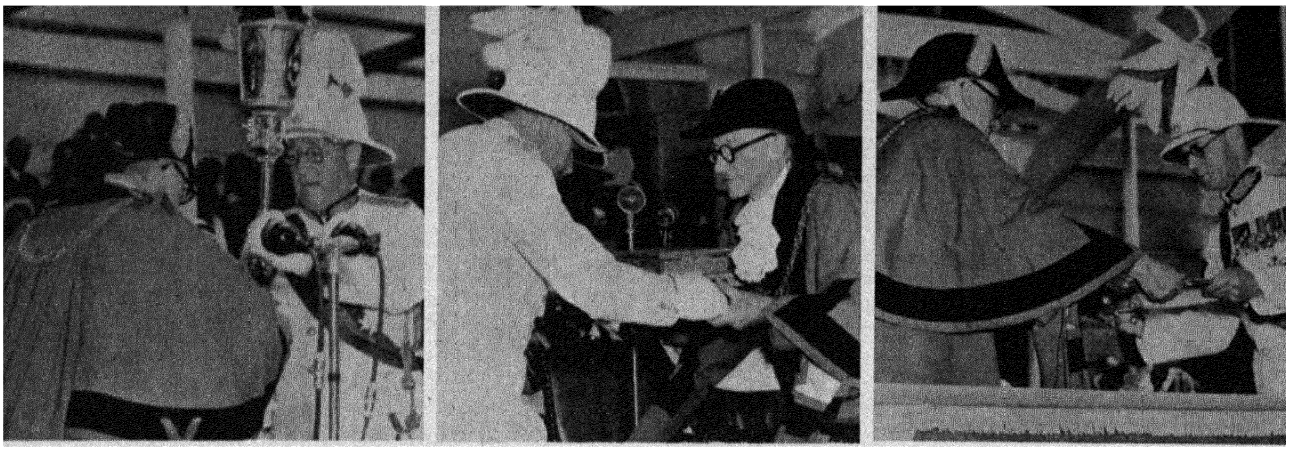
KENDALL, EDWARD CALVIN, American biochemist (b. South Norwalk, Connecticut, March 8, 1886), was educated at Columbia university, where he graduated M.S. in 1909 and Ph.D. in 1910. During 1910 and 1911 he was research chemist with Parke, Davis and Co. at Detroit



Sir Gerald Kelly's "Mrs. Davies-Brooke" exhibited at the Royal Academy, London, 1950.

and was engaged in investigations concerning the thyroid gland. He continued this work at St. Luke's hospital, New York, from 1911 until 1914, when he joined the Mayo foundation as head of the section on biochemistry and professor of physiological chemistry. His main interest was in the chemistry of the endocrine or ductless glands. On Christmas Day 1914 he isolated thyroxine, the hormone or active constituent of the thyroid gland. Later he succeeded in crystallizing glutathione and in establishing its chemical structure. His work on the chemistry of the suprarenal cortex was described in a series of papers beginning in 1934. The isolation of Cortisone (at first termed Compound E) was achieved by Kendall and his colleagues H. L. Mason and C. S. Myers in 1935 and announced in 1936. Kendall was closely associated with P. S. Hench (*q.v.*) and other Mayo clinic workers in the earliest clinical trials on Cortisone in 1929. The 1950 Nobel prize for medicine was awarded jointly to Kendall, Hench and T. Reichstein (*q.v.*) "for their discoveries concerning the suprarenal cortex hormones, their structures and biological effects." His great contributions to steroid chemistry brought him many honours in addition to the Nobel prize, and in 1950 he was regarded as one of the world's greatest biochemists. (W. J. BP.)

KENYA. British colony and protectorate in east Africa bounded N. by the Anglo-Egyptian Sudan and Ethiopia, E. by British Somaliland and the Indian ocean, S. by Tanganyika and W. by Uganda. Area: 224,960 sq.mi. Pop. (1948 census): 5,373,231 incl. 5,218,385 Africans, 29,660 Europeans, 90,528 Indians, 7,159 Goans, 24,174 Arabs and 3,325 others. Language: various Bantu and Nilotic; Swahili (a mixture of Arabic and various African tongues) used as a *lingua franca.* Religion: Africans mainly pagan; tribes on the northern frontier and on the coast are Moslem; *c.* 300,000 Africans Christian. The protectorate is a strip of land extending 10 mi. inland along the coast from Tanganyika to Kipini



On March 30, 1950, Nairobi, the capital of Kenya, received letters patent conferring on it the status of a city. The mayor, F. G. R. Woodley, received gifts of a mace from the governor of Kenya (left), a silver inkstand from the governor of Tanganyika (centre) and a silver salver from the governor of Uganda (right).

(and the Lamu archipelago) and constitutes the mainland dominions of the sultan of Zanzibar (*q.v.*). Principal towns: (pop., 1948 census): Nairobi (*q.v.*; cap., 118,976); Mombasa (port, 91,893). Administration; governor; executive council; Legislative Council, speaker, 7 *ex officio*, 9 nominated official and 22 unofficial members, the latter comprising 11 elected Europeans, 5 elected Indians, 2 Arabs (1 elected) and 4 nominated Africans. Governor, Sir Philip Mitchell.

History. On March 30, 1950, the Duke and Duchess of Gloucester arrived in Nairobi (*q.v.*) by air to present to the mayor and council a royal charter conferring upon the town the status of a city. At Mombasa on July 7 the East African naval force was formally inaugurated. In February an agitation was raised by the Kenya Electors' union as a result of consultations that were taking place in Tanganyika about constitutional reform in that territory and that were thought likely to constitute a threat to the political status of European settlers in British East Africa. In April, for the first time, Indian and African leaders held a joint political meeting, and in May a general strike developed in Nairobi, occasioned by the arrest of the African president and the Indian general secretary (a self-professed Communist) of the so-called East African Trades Union congress. The strike did not spread outside the city and it collapsed after eight days. On April 24 a clash took place at Nginyang between a party of armed police and 300 spearmen of the Suk tribe led by a wanted religious fanatic called Lucas Kipkech. A district officer, two European police officers, an African constable and 29 Suk were killed, including Kipkech.

In August the government set up a committee, with African members on it, to investigate the possibility of introducing a graduated tax for Africans based on income. In July coal was reported in the Kitui area and 1,400 sq.mi. were closed to prospecting. It was announced that the Colonial Development corporation would develop the Macalden copper and gold mine on Lake Victoria. Talks at command level on East African defence took place in Nairobi in October.

Finance and Trade. Currency: East African shilling (20*s.* = £1 sterling). Budget (est. 1950): revenue £11,089,270, expenditure £10,983,788; development budget, revenue £4,799,708 and expenditure £6,162,129. Foreign trade (1949): imports £54,123,277; exports, incl. re-exports, £29,173,704. Principal exports: sisal, coffee, radium, carbonate, hides and skins, tea, pyrethrum.

See Negley Farson, *Last Chance in Africa* (London, 1950): G. W. B. Huntingford and C. R. V. Bell, *East African Background* (London, 1950).

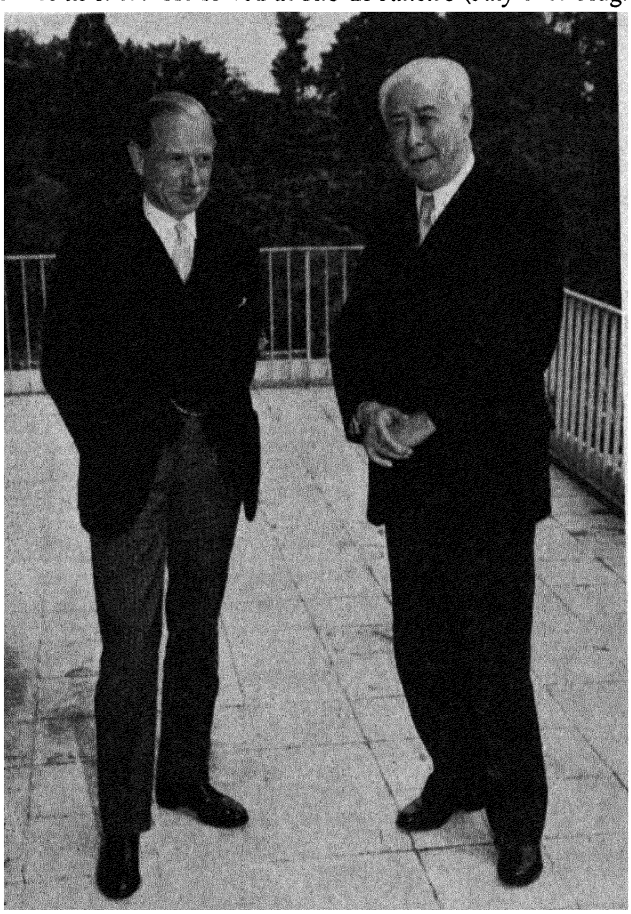
(K. G. B.)

KHRUSHCHEV, NIKITA SERGHEYEVICH, Soviet politician of Russian nationality (b. Kalinovka, Kursk province, April 17, 1894). The son of a coal miner, he joined the Russian Communist party in 1918. After the Civil war he worked in an iron mine, enrolled in a *Rabfak* evening school and by 1925 had been given a party appointment at Stalino and later at Kiev. In 1929 he was sent to study for two years at the Industrial academy in Moscow, and in 1932 was a secretary of the Moscow city committee of the party. In 1934 he was elected to the central committee of the All-Union Communist party (V.K.P.) and the following year succeeded L. M. Kaganovich as first secretary of the Moscow regional and city committees—the most important single area organization in Russia proper. At the beginning of 1938 he was sent to Kharkov, then the capital of the Ukraine, as secretary general of the Ukrainian Communist party (U.K.P.) and on March 23, 1939, was elected full member of the Politburo of the V.K.P. During the German occupation of the Ukraine he co-ordinated, as lieutenant general, the guerrilla movement there. After the liberation of the Ukraine from German occupation in 1943 he became also chairman of the Ukrainian council of people's commissars in Kiev. On March 4, 1947, he was succeeded by Kaganovich as secretary general of the U.K.P., but retained the premiership. When Kaganovich returned to Moscow that December, Khrushchev again became secretary general of the U.K.P., being succeeded as premier by D. S. Korotchenko. On Dec. 16, 1949, he was recalled to Moscow to take up again the post of first secretary of the Moscow regional and city committees of the V.K.P. Khrushchev was also made responsible by the Politburo for carrying out the enlargement of collective farms (*kolkhoz*) by amalgamation. In *Pravda* of April 25, 1950, he explained why smaller *kolkhozy* must be absorbed into bigger ones.

KIM IR-SUNG (KIM IR SEN or KIM IL SUNG), Korean Communist leader (b. near Pyongyang, 1912 or 1913). He was believed to have been born as Kim Sung Chu and to have adopted the name of a famous guerrilla leader who died in action in 1919. His family had moved out of Korea after the anti-Japanese rising in 1919 had failed. In 1932 he formed his first anti-Japanese guerrilla group. The next year he was invited to Moscow where he was trained in special schools for oriental students. Back in the far east in 1936 he became head of two Soviet-sponsored organizations: the Korean Patriots' band in Manchuria and the Korean Union for the Liberation of the Fatherland, working underground in Korea. During World War II, until 1945, he was at Yenan, seat of the Chinese Communist government, as one of the leaders of the Korean Communist party. After the occupation of northern Korea by the Soviet army he moved to Pyongyang where on Sept. 6, 1945, he was instrumental in proclaiming a people's republic. In 1947 his rival Cho Man Sik was dismissed from the post of the secretary general of the party, and Kim succeeded him. On Sept. 2, 1948, a Democratic People's Republic of Korea was

proclaimed with General Kim as prime minister and commander in chief. On March 21, 1949, in Moscow, he signed with Andrey Vyshinsky a 10-year agreement for economic and cultural co-operation. On the morning of June 26, 1950, he broadcast to the people of Korea announcing that, after halting the aggression of the " traitor " Syngman Rhee, the Korean people's army under his command started the historic task of unification of the fatherland.

KIRKPATRICK, SIR IVONE AUGUSTINE, British diplomat (b. Feb. 3, 1897). He was educated at Downside and at Balliol college, Oxford, served in World War I as an intelligence officer and entered the diplomatic service in 1919. He served at Rio de Janeiro (July 1919-Aug. 1920), in the Foreign Office and in Rome (from May 1930). In Aug. 1933 he was transferred to the British embassy in Berlin where he was head of the chancery under two ambassadors, Sir Eric Phipps and Sir Neville Henderson. In Dec. 1938 he returned to the Foreign Office, was seconded from April to Aug. 1940 to the Ministry of Information and from Oct. 1941 to the British Broadcasting corporation as controller of European services. With the rank of ambassador from Sept. 1, 1944, he organized the British element of the Allied Control commission for Germany, but remained at the Foreign Office when the commission moved to Berlin. Appointed assistant under secretary of state on Aug. 1, 1945, and deputy under secretary of state on April 22, 1948, he succeeded Sir William Strang as permanent under secretary of state (German section) on Feb. 1, 1949. On March 16, 1950, he succeeded General Sir Brian Robertson as British high commissioner in Germany. In 1948 he was created a K.C.M.G. and on Jan. 1, 1951 a K.C.B.



Sir Ivone Kirkpatrick, the new British High Commissioner in Germany (left), with Theodor Heuss, during his first official visit to the president of Western Germany.

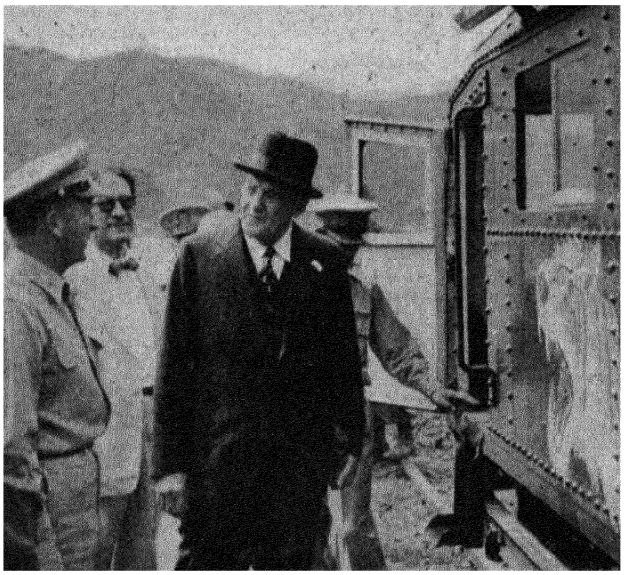
KOREA. Peninsula extending from Manchuria southward 600 mi. between the Yellow sea and the Sea of Japan; for 11 mi. it borders the U.S.S.R.; the rest of the boundary is with China (Manchuria). Total area: 85,225 sq.mi. Total pop.: (1944 census) 25,120,174; (1949 est.) 29,239,000. The 38th parallel N., chosen in 1945 to separate Soviet and U.S. forces accepting the surrender of Japanese troops, remained as the artificial division between Korean governments organized in each zone. The southern zone had 44% of the area, but its population (Sept. 1949 est.) of 20,189,000 was more than twice that of the northern zone (1949 est., 9,050,000). Religion: Buddhist, Confucian and a unique eclectic religion Tonghak; in 1939 there were about 500,000 Korean Christians. Chief towns in the south (pop., May 1949 est.): Kyongsong or Seoul (cap., 1,446,049); Pusan (473,619); Taegu (313,705); Inchon (265,767). In the north: Pyongyang, the northern capital (pop., 1949 est. 450,000). Republic of Korea (south): president of the republic, Syngman Rhee (*q.v.*); prime minister, Shin Sung Mo. People's Democratic Republic of Korea (north): chairman of the presidium of the Supreme People's assembly, Kim Du Bon; prime minister and commander in chief, General Kim Ir-Sung (*q.v.*).

History. The first half of 1950 was marked by important adjustments between the United States and the Republic of Korea regarding economy, reforms and measures for defence, by the holding of the elections and by steps taken to implement the land reform laws and equalize taxation. Tension along the 38th parallel increased and guerrilla warfare was waged by North Koreans in all the South Korean provinces. Unification plans by peaceful methods were part of the platforms of all moderates in the elections in South Korea; they were also the subject of North Korean proposals in June and were considered in good faith by United Nations officials. The second half of the year was marked by the Korean war. (*See* KOREAN WAR.)

On Jan. 19, the U.S. House of Representatives defeated the $60 million Korean aid bill, an action stemming largely from opposition to the government's China policy. Both President Harry S. Truman and Dean Acheson urged the house to repeal its veto. A new Korean aid bill linked to extension of aid to Formosa passed the house on Feb. 10. It authorized $60 million in aid which with previous authorization for an equal amount represented a reduction of $30 million from the original sum requested by the State Department. Among the new stipulations to the bill was the provision that U.S. aid would terminate at once if a coalition government were established which included a member of the Communist party of North Korea. Acheson sent a note to the Korean ambassador in Washington demanding greater economy in government spending and emphasized the seriousness with which the U.S. would view any postponement of the elections.

On May 30 approximately 7 million people went to the polls to vote for 210 deputies. Independent candidates won 120 seats and only 31 former members were returned. This was interpreted as a move against the government of Syngman Rhee rather than support for Communism because the terrorist acts of the police, especially after the appointment of Paek Sung Ok, the German-educated minister of the interior, had alienated many from support of the government. The election results were a sign of a pull away from the extreme right.

Another U.N. commission on Korea was authorized by the general assembly in spite of opposition from the Soviet Union and its satellites, but the new commission met with no better success than the former commission in its unification attempts or any of its efforts to enter or communicate with leaders in North Korea. The North Korean press and radio were extremely offensive in their attacks on the commission,



John Foster Dulles, Republican adviser to the United States secretary of state (centre), during his visit to Korea in June 1950.

branding it as a tool of the Rhee regime and of the U.S. However, in the first days of June the North Korean government announced that it would send three envoys to the 38th parallel to discuss with U.N. members plans for unification. Two weeks later the Northern proposals were broadcast: they called for unification under certain conditions including the arrest of Rhee and other "traitors."

On Jan. 26 a military assistance agreement between the U.S. and the Republic of Korea was signed. Korea thereby became eligible for a share of the $27 million voted by congress for strengthening Korea, the Philippines and Persia against Communism. By June 25 the first shipment of arms under this agreement was on the seas. In April Shin Sung Mo, minister of defence, became acting premier when Lee Bum Suk resigned.

Agriculture. Rice production in the south in 1949 was estimated at 2·7 million metric tons, nearly five times the barley crop, 30 times the wheat crop. Figures for 1948 were (metric tons): rice 2,500,000; barley 564,873; wheat 89,912; rye 18,896. In spite of high yield in rice, the price reached a record height in Jan. 1950. doubling in price in six weeks. Agricultural production for 1949 was aided by E.C.A. imports: $24·7 million was spent on fertilizers. Estimated expenditure by E.C.A. for fertilizers for 1950 was $34,670,870.

Industry. Southern production of anthracite coal in 1949 about doubled that of 1947. Three new power projects were announced by E.C.A. on Dec. 28, 1949, to increase electric output by 59,400 kwh. E.C.A. also announced in Jan. 1950 a project to increase the output of tungsten by 100 metric tons per day. Production in the south increased substantially in the following items: electric insulators, amorphous graphite, brick, paper, cotton yarn, rubber shoes and salt. Production goals for 1948 in the north were claimed to have been attained in 1949. However industrial production had been lagging considerably according to statements made by Communist officials at the end of the year. The lack of electric power, shut off by North Koreans, hampered industry in the south.

Finance. In South Korea the budget for the fiscal year 1950-51 was 50,833·7 million won in revenue, plus 95,047·5 million special income; estimated expenditures were 89,230·4 million won for general and 56,650·8 million for special. In North Korea, the 1950 budget was estimated at 25,222·7 million won revenue and 26,722·7 million expenditure. Currency circulation in the south increased from 34,000 million won in March 1948 to 74,000 million in March 1950. The official exchange rate of the *won* in Jan. 1950 was U.S.$ 1 = 450 won.

See G. M. McCune and A. L. Grey, Jr., *Korea Today* (London, 1950).

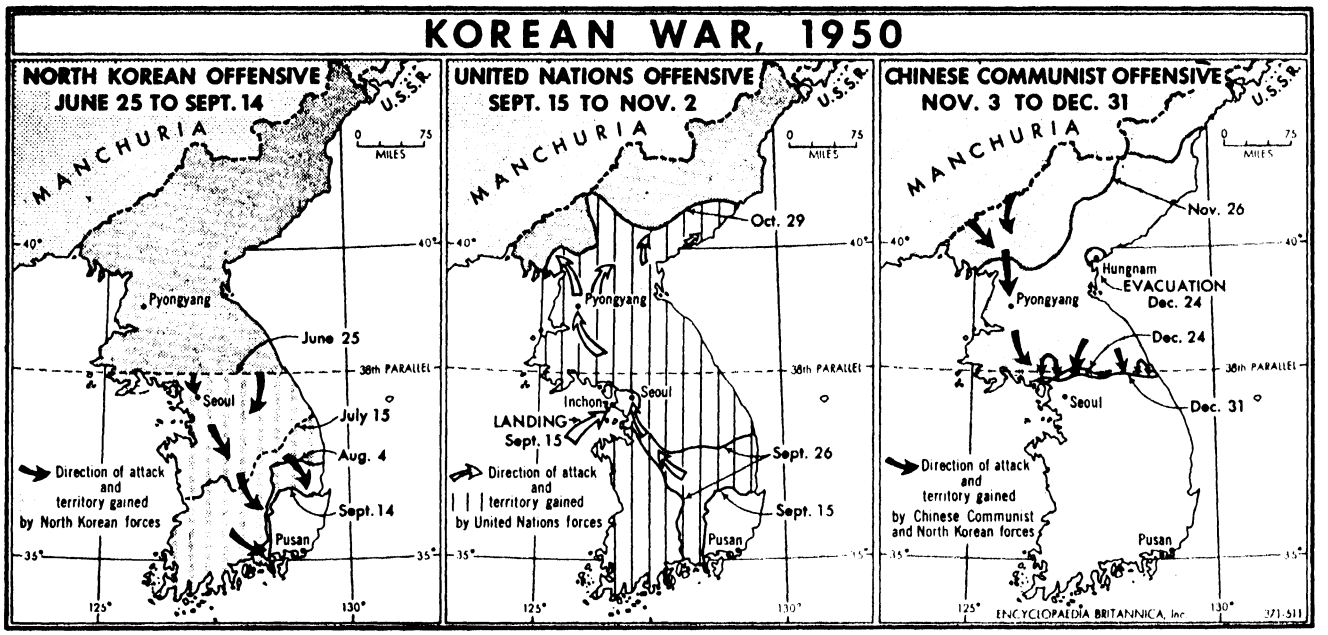
(E. B. Mc.; W. Sm.)

KOREAN WAR. Towards the close of World War II, on Aug. 8. 1945, the U.S.S.R. declared war against Japan in order to assist the Allies in completing the victory in the Pacific. Korea had been under Japanese rule since 1910, and after the signing of the World War II surrender, U.S. troops and the forces of the Soviet Union participated in accepting the surrender of the Japanese troops in Korea. In Sept. 1945 the occupation of Korea by U.S. and Soviet forces was completed. The 38th parallel was chosen as the arbitrary dividing line between North and South Korea for the surrender acceptance, with Soviet forces to the north and U.S. forces to the south. The selection of this line was adopted for military purposes only, and, so far as the U.S. intentions were concerned, was not meant to be a barrier cutting Korea into two sections. The United Nations resolutions, adopted without Soviet concurrence, established a nine-nation U.N. temporary commission on Korea. These resolutions called for an election under the commission's observation to choose a representative National Assembly to adopt a democratic constitution and establish a national government. It was soon clear that a unified Korea was not the Soviet intention, and on May 10, 1948, an election was held in South Korea—confined to the south because the U.S.S.R. refused to allow the U.N. temporary commission access to North Korea.

As a result of the election, the government of the Republic of Korea (South Korea) was inaugurated Aug. 15, 1949, at which time the U.S. terminated its military government in Korea and began the reduction of its occupation forces. By July 1, 1949, the Korean military advisory group



Koreans using primitive methods to level the ground for the Taejon air strip in July 1950.



consisted of approximately 500 U.S. officers and enlisted men, whose mission was the creation of defensive and internal security forces for South Korea. At the end of Dec. 1948 the U.S.S.R. reported completion of the withdrawal of its occupation forces from Korea, but the U.N. commission was not permitted to verify this action. In the meantime, the People's Democratic Republic of Korea (North Korea) had been established after an election not witnessed by the U.N. commission, and had been accorded recognition by the U.S.S.R. In the succeeding months, especially from June 1949 to June 1950, there was an increasing number of raids by increasingly stronger forces which crossed the 38th parallel from North Korea to South Korea attacking smaller forces of South Koreans. Protests were made to the U.N. and South Korean forces managed to repel these raids and to maintain the artificial boundary.

On June 25, 1950, at 4 A.M., without warning, the North Korean armed forces struck across the 38th parallel in force. On June 27 the Security council called on U.N. member states to assist in repelling them. At the request of the council, General Douglas MacArthur (*q.v.*) was designated by the president of the U.S. on July 8, 1950, as the commander of all U.N. forces in Korea. (*See* also UNITED NATIONS for political actions.)

First Phase: North Korean Drive to Pusan. Driving down the peninsula with the main effort down the Ponchon-Seoul corridor, the North Korean infantry, led by an estimated 100-150 Soviet-made tanks, achieved complete tactical surprise. Simultaneous secondary attacks were launched on the east coast, in the eastern mountains and in the Ongjin peninsula to the west. The initial North Korean attack was mounted with four to six infantry divisions and at least two brigades of border constabulary supported by Soviet-made medium tanks and approximately the same number of Soviet-made combat aircraft, the entire force totalling about 96,000 troops.

Republic of Korea troops, on the other hand, had along the 38th parallel some four divisions without armour or heavy artillery and with only 16 training aircraft. The lightly armed South Korean troops, confronted by greatly superior numbers and equipment, were forced to withdraw, and the armoured columns of the North Korean army drove within five to seven miles of Seoul on the first day. By 9:30 A.M. of the third day, North Korean tank columns entered Seoul and street fighting for the capital city of Korea began. The South Korean government moved its capital south to Suwon.

On June 27, at the time when the North Korean tank columns entered Seoul, President Harry S. Truman announced that he had ordered U.S. air and sea support of South Korean troops as the beginning of the U.N. effort in Korea. When President Truman on June 30 ordered a naval blockade of the Korean coast, the U.S. navy immediately took up blockade positions and in accordance with the president's earlier order began air and surface bombardment of military targets. On the same day, two reinforced rifle companies of the U.S. 24th Infantry Division were flown to Korea and on July 5 their initial contact was made with North Korean troops in the vicinity of Osan, south of Seoul.

The U.S. air force went into action against the North Koreans within three days of the initial attack. By the middle of July, the U.S. 24th and 25th divisions had closed with the enemy; the South Korean forces had stiffened their resistance; the navy was involved in continuous coastal bombardments and naval air attacks; and the air force was engaged in round-the-clock bombing in support of U.N. troops.

The U.N. forces had withdrawn to the south bank of the Kum river, the last natural barrier before Taejon, and had dug in. Lieut. General Walton H. Walker, commanding general of the U.S. 8th army, assumed command of the ground forces in Korea on July 13. By July 15, the North Koreans had established a bridgehead across the Kum river northwest of Taejon and by July 17 had reached the outskirts of Taejon. On July 18, the 1st Cavalry Division, in the first amphibious landing of U.N. forces in Korea, went ashore unopposed at Pohang. On July 20, the U.S. 24th division withdrew its rearguard from Taejon, and two days later Major General William F. Dean, its commander, was officially listed as missing. At the same time the U.S. army's new 3·5-in. bazooka was used for the first time with great success, against heavily armoured Soviet-made tanks which since the beginning of the Korean attack had moved almost unopposed through the South Korean army. The North Korean 4th and 6th divisions effected a strategic envelopment against Republic of Korea police forces and, driving toward western and southern ports, seized Mokpo, Kwangju, Amwon and Chinan on July 24. After shifting the direction of the attack to the east, the enveloping force drove toward the ports of Masan and Pusan.

During this period, numerically superior North Korean forces continued their pressure in all sectors, despite heavy losses sustained in air and ground actions. The U.N. forces



A cartoon "How far do we carry him?" by Vicky published in the "News Chronicle" (London) on Oct. 25, 1950 as United Nations forces approached the 38th parallel.

in successive withdrawals lost Yongdong and Yongdok on the west coast and corresponding towns in the central and eastern sectors during the slow compression of the peninsula defence. It became evident that the enemy strategy was a double envelopment of the U.N. forces, at the same time maintaining pressure in the centre. The deepest penetration in this area occurred on Aug. 6 when North Korean forces were stopped eight miles west of Masan by a U.N. attack.

By this time, Australia, Canada, France, the Netherlands, New Zealand, the United Kingdom and the United States had all sent naval forces to aid the U.N. effort and the U.N. naval force maintained a continuous patrol of North Korean ports and coastline together with carrier-based air attacks and shore bombardments. Heavy air attacks on rail and highway traffic during daylight by the U.N. air force compelled North Korean forces to move only at night. North Korean air activity practically ceased. The South Korean forces, overwhelmed in the early combat, had regrouped and had been resupplied and were fighting effectively.

By Aug. 4 the withdrawal of the U.N. forces to defensive positions east of the Naktong river had been completed. Severe attacks by the North Koreans probing for a crossing of the river succeeded to the extent that one North Korean division crossed south of Pugong-ni and despite heavy casualties remained there. Other crossings were forced, but in many seesaw battles back and forth across the river U.N. forces managed generally to maintain their positions.

On Sept. 1 the North Koreans opened a general offensive against the U.S. 2nd and 25th divisions on the left flank of the Naktong defence line with 13 infantry divisions and 2 new tank regiments. Within two days the attack spread over the entire U.N. line. Initial penetrations of 6,000 to 8,000 yd. in the north sector of the Naktong river area were contained after bitter fighting and United Nations counter-attacks began to make limited progress. By Sept. 12 the momentum of the North Koreans' attacks had been lost, and they were forced to withdraw after suffering severe casualties. Though the Naktong river had been crossed at several points, counter-attacks had generally restored U.N. positions.

Throughout these engagements the U.N. forces, ever increasing in number and strength, had repulsed the heaviest attacks that the enemy was able to mount. U.N. losses were heavy but those of the North Koreans were far heavier. With the comparative stabilization of the line, the compression of the bridgehead and the preparation of the U.N. forces for the offensive, one phase of the war was ended.

Second Phase: U.N. Forces on the Offensive. On the early morning of Sept. 15, the U.S. 10th corps launched an amphibious landing on the island of Wolmi-Do, commanding the approaches to Inchon. The Marines secured the island within an hour and a half, and 11 hours later Inchon was stormed by the 1st Marine division, four Republic of Korea marine battalions and supporting army and navy units. The attack had been preceded by bombing and shelling of the Inchon area by naval ships and aircraft. Within two days the U.N. forces had advanced all along the line against stubborn resistance, and Kimpo airport had been retaken. In an enveloping movement, Seoul, the capital city, fell on Sept. 2 and on Sept. 29 the Republic of Korea government moved back into Seoul.

On Sept. 16 the 8th army attacked with the mission of effecting a juncture with the troops at the Inchon bridgehead. Within four days, U.N. forces had driven westward almost to Chinju. In the north sector, the U.S. 1st corps crossed the Naktong river on Sept. 19 and drove up the main Kumchon-Taejon axis and advanced about 35 mi. On the far northern and western fronts the North Korean troops began withdrawing on Sept. 22, and within six days they had withdrawn 70 mi. northward. The credit for the rapid progress on this front went to the Republic of Korea 1st and 2nd corps. On Sept. 26 troops from the U.S. 1st Cavalry division made contact with the 7th Infantry division, and the 8th army and the 10th corps were united. Thus all effective escape routes in the pocket were closed, and encircled North Korean forces numbering more than half of the North Korean invaders faced death or capture. During the next week, U.S. forces reached the 38th parallel, and South Korean troops, who crossed the 38th parallel on Oct. 1, had advanced up the east coast approximately 50 air miles north of the 38th parallel.

For the first 96 consecutive days of operation, the air force had flown a total of 40,456 sorties (including 1,520 sorties by Royal Australian squadrons) and had delivered 29,711 tons of bombs, expended more than 23 million rounds of ammunition and 63,000 rockets, carried 16,000 tons of freight and 25,000 passengers, evacuated 8,500 persons and dropped more than 51·5 million leaflets.

By Oct. 10 the Republic of Korea 1st corps, consisting of the 3rd and Capitol divisions, captured the North Korean port of Wonsan, advancing about 15 mi. a day against elements of three divisions and numerous garrison units. The 8th army moved up the peninsula, relieved the 10th corps in the Seoul-Inchon area on Oct. 7 and continued its attack to the north.

On Oct. 9 elements of the U.S. 1st Cavalry division crossed the 38th parallel and drove toward Pyongyang. By Oct. 20, the capital of North Korea had fallen. In the meantime, on Oct. 18, the Republic of Korea Capitol division entered Hamhung and Hungnam, while other U.N. forces advanced

rapidly to the north, against light resistance. Major General Edward M. Almond now commanded all U.N. forces on the east flank in the Wonsan-Hamhung area.

On Oct. 26, elements of the U.S. 1st Marine division landed at Wonsan, ending a six-day wait for mine clearance. On the same day the Republic of Korea 6th division gained the distinction of being the first of the U.N. forces to reach the Manchurian border (near Chosan). On Oct. 29 the U.S. 7th Infantry division with Republic of Korea units landed at Iwon about 180 mi. N. of Wonsan. Towards the end of October, North Korean resistance stiffened and throughout the front about 50 mi. S. of the Manchurian border U.N. forces experienced greater difficulty in their efforts to reach the Yalu river and the border.

On Oct. 27 Chinese Communist forces were first encountered in combat by the Republic of Korea army in the vicinity of Unsan. On Nov. 1 the 8th Cavalry regiment of the U.S. 1st Cavalry division was ambushed by Chinese Communist forces near Unsan with heavy U.S. casualties and loss of material. Strong enemy counter-attacks throughout the front put the U.N. forces on the defensive except for limited actions. On the same day the air force encountered jet planes for the first time in the Korean war and discovered other Communist aircraft in the air and on the ground for the first time in several months.

On Nov. 6 General MacArthur reported officially to the U.N. Security council that Chinese Communist forces were fighting in Korea. During this period the Chinese Communists continued to assert that any forces fighting in Korea were volunteers and not organized regular Chinese units.

South Korean refugees presented throughout the campaign a difficult problem not only because they clogged the roads and in many cases were destitute and had to be supplied with food, but also because it was difficult to distinguish *bona fide* refugees from Communist guerrillas. In many cases, organized troop units operating as guerrillas infiltrated U.N. positions, requiring large numbers of U.N. troops to guard supply lines.

With the Chinese Communist intervention, the second phase of the Korean war ended, with the original invading army of North Koreans largely destroyed, their air force out of action and their sea forces non-existent. The U.N. army combat forces representing six different nations, the U.N. air force representing three nations and the U.N. sea forces representing nine nations had advanced from a perimeter defence at Pusan practically to the Manchurian border. Until the commitment of the Chinese, about 140,000 prisoners had been taken. Great quantities of supplies and equipment had been seized.

Third Phase: Chinese Aggression. The third phase of the Korean war started with the appearance of Chinese Communist forces south of the Manchurian border in force. The combat potential of the North Korean army had been reduced practically to zero, and with the movement of the Chinese armies across the Yalu river and the supply and transport of its army in a build-up just north of the border, an "entirely new war" began. On Nov. 9 an enemy jet fighter was destroyed by a U.S. F-80 aircraft. This was the first jet-against-jet engagement in history.

Despite the attacks of the Chinese Communists, U.N. forces continued advances on several fronts. By Nov. 15 the 7th Marines advanced against heavy resistance and had reached the Choshin reservoir. On Nov. 20 the U.S. 7th division reached the Manchurian border at Hyesanjin. These actions, together with the Republic of Korea division's reaching the Manchurian border near Chosan, constituted the farthest point of advance of the U.N. forces.

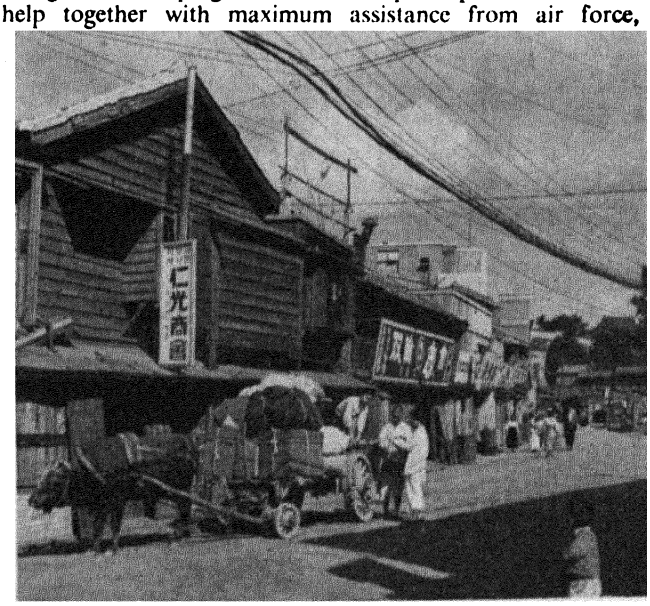
On Nov. 24 an offensive was launched by the 8th army, and by the next day elements of the U.S. 24th Infantry division had taken Chonju. The offensive disclosed a tremendous build-up of Chinese Communist forces to the extent of possibly 24 divisions. Had the 8th army remained stationary and not subjected the enemy to attack, it was probable that the Chinese offensive would have been launched shortly thereafter. The attack progressed satisfactorily for two days when strong counter-attacks largely by Chinese troops required U.N. forces to resume defensive operations.

In the east coast sector within the 10th corps area, U.N. forces faced only sporadic resistance. However, in the western sector Chinese Communists launched a strong offensive and on Nov. 27 a major effort was made against the U.N. 8th army right flank in the Tokchon area. In spite of heavy losses, the Chinese continued their advance, employing elements of about eight Chinese Communist divisions while continuing holding operations on the remainder of the 8th army position with six additional Chinese Communist divisions. Communist guerrilla activity became increasingly troublesome during this period, and nearly 30% of the U.N. troops in Korea were employed in protecting vital lines of communication. It was estimated that 30,000 to 35,000 guerrillas were in action against U.N. forces.

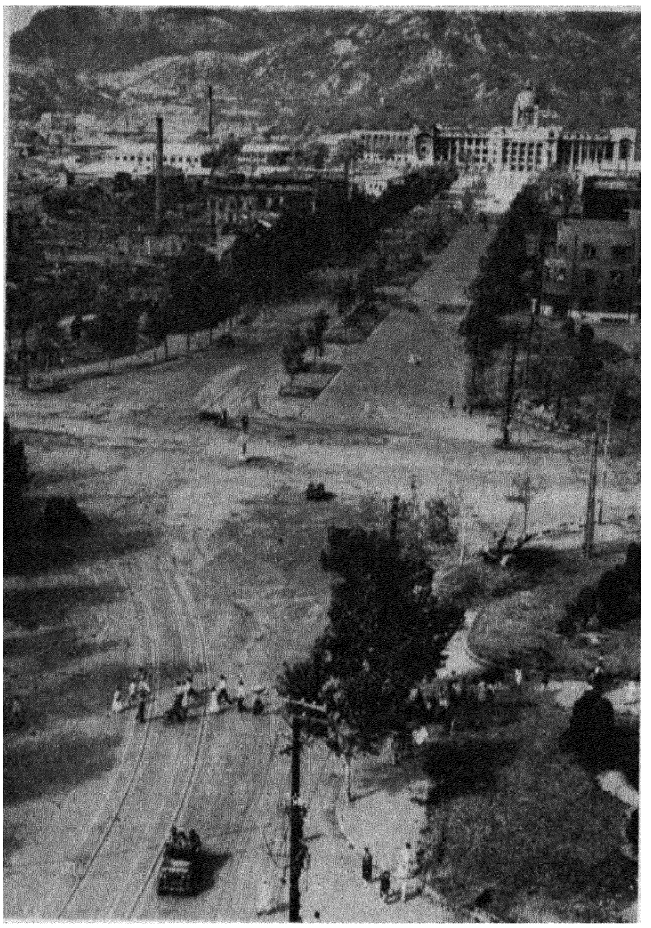
On Nov. 24 and on Nov. 28 General MacArthur reported that all hope for localization of the conflict to North Korean troops with only token Chinese elements must be abandoned. He stated that this was undeclared war and estimated that more than 200,000 Chinese Communist troops were now arrayed against the U.N. forces in Korea.

The U.S. 10th corps, operating on the right flank out of the east coast ports of Wonson and Hamhung, had reached the Manchurian border at several points when the Chinese Communists attacked. The forced withdrawal of the 10th corps seriously endangered the troops in the Choshin reservoir area about 50 mi. from the coast. A general withdrawal toward Hungnam was ordered, the port of Wonsan was abandoned and a huge evacuation fleet was concentrated at Hungnam. In the withdrawal to the port the 1st Marine division and the three battalions of the 7th Infantry division encountered from six to eight Chinese Communist divisions.

On Dec. 4 these U.N. units attacked southward to rejoin the remainder of the 10th corps. A Marine battalion and later a special task force of the 3rd Infantry division were charged with keeping the road to the port open and with this help together with maximum assistance from air force,



Citizens of Inchon returning to their homes after the capture of Inchon from the North Koreans in Sept. 1950.



The city of Seoul after its recapture by United Nations forces in Sept. 1950. (This photograph should be compared with that on page 376 of the "Britannica Book of the Year 1950").

marine and naval aircraft by bombing, supplying and evacuating the wounded, the surrounded forces blasted their way to the port. On Dec. 10 leading elements of the column entered the 10th corps defensive positions and by Dec. 12 the concentration of the 10th corps was complete. Fighting against terrific odds in the bitter cold, the Marines and the three battalions of the 7th division had to march and fight 60 mi. along a narrow and often precipitous road. From Dec. 12 to Dec. 24, the 10th corps engaged in a succession of withdrawals upon the port of Hungnam. Heavy bombardment and air attacks from naval ships assisted materially in the success of the evacuation. As the 10th corps troops and their equipment were embarked, the beachhead contracted and the 3rd and 7th divisions and later the 3rd division alone defended the beachhead. Naval guns furnished artillery support for defending troops and air force, naval and marine planes prevented enemy concentrations in sufficient numbers to endanger the defence. By Dec. 24 the evacuation had been completed. Approximately 105,000 men, 17,500 vehicles, 350,000 tons of cargo and 91,000 Korean civilians had been evacuated from Hungnam.

In the meantime, the Communist attack on the 10th corps forced the 8th army to withdraw. The U.S. 2nd Infantry division and the Turkish brigade were exposed to heavy enemy pressure but succeeded in protecting the right flank of the army.

During the last two weeks of December, the U.N. forces were engaged principally in regrouping in defensive positions near the 38th parallel in preparation for an anticipated enemy attack Tenth corps troops who had been evacuated from Hungnam were moved up to defensive positions and resupplied. Local patrol action and skirmishes with the enemy in size up to approximately a regiment took place, but there was no concentrated offensive effort on either side. At the end of the year it was evident that the Chinese forces, noted for their slow build-up of men and equipment, were preparing for an all-out assault against U.N. positions.

In General MacArthur's communiqués and in reports from front-line observers, one of the most significant results of the Korean war from June 25 until the end of the year was the extent of the U.N. co-operation among air, ground and sea forces. Never before in modern war had armed forces encountered a situation in which such close co-ordination was required. U.N. ground forces, the U.N. air force and U.N. sea forces were integrated into one fighting force, cohesive and co-ordinated. Press commentators pointed out, however, that the Korean war could not be interpreted as a prototype for future wars. The enemy, after the earlier engagements, never used air power except in negligible strength. U.N. sea forces were in complete control of both coasts of Korea. On the ground, U.N. troops were faced by large numbers of troops with, except in earlier phases, little armour and comparatively little heavy artillery. The North Korean troops and those of Communist China were lightly equipped and lightly armed, relying upon unconventional methods of transport and utilizing the mountainous terrain of Korea to the utmost advantage. In this respect, U.N. forces were comparatively road-bound and consequently frequently at a disadvantage in the mountains.

The death of General Walton H. Walker (*see* OBITUARIES), commanding general of the 8th army, in a traffic accident on Dec. 22, resulted in the assignment of Lieut. General Matthew B. Ridgway, U.S. army deputy chief of staff, as commanding general, 8th army. (*See* also UNITED NATIONS.)

(C. V. C.; G. S. B.)

U.N. GROUND, SEA AND AIR UNITS, IN ADDITION TO THOSE OF THE UNITED STATES AND REPUBLIC OF KOREA, IN ACTION IN KOREA BY Dec. 31, 1950.

Australia: 2 naval vessels; R.A.A.F. squadron; 1 infantry unit.
Belgium: 3 aircraft with crews.
Canada: 3 naval ships; 1 R.C.A.F. transport squadron; 1 infantry unit; Canadian-Pacific airline facilities (commercial).
France: 1 infantry unit.
Great Britain: 9 naval ships; 2 infantry units; brigade group; marine commando unit; 1 R.A.F. flight.
Greece: 7 transport planes; 1 infantry unit.
India: field ambulance unit.
Netherlands: 1 naval ship; 1 infantry unit.
New Zealand: 2 ships; volunteer artillery unit.
Philippines: a number of tanks; 1 infantry unit.
Sweden: field hospital unit.
Thailand: regimental combat team; 3 ships.
Turkey: regimental combat team.
Union of South Africa: 1 fighter squadron.

U.N. CASUALTIES IN THE KOREAN WAR.

United States. The U.S. Department of Defence announced that U.S. casualties from the beginning of the Korean War up to Dec. 29, 1950, totalled 40,176, including 6,031 killed or died of wounds, 27,997 wounded in action and 6,148 missing.

Great Britain. Emanuel Shinwell, minister of defence, announced in the House of Commons on Dec. 7, 1950, that up to the beginning of the Chinese offensive the total casualties of the British forces in Korea were 52 killed, 174 wounded and 5 missing. The Royal Marine commandos lost 8 killed, 26 wounded and 35 missing.

Turkey. The casualties of the Turkish contingent to Dec. 31, 1950, were 420 killed or missing and 400 wounded.

KUWAIT: *see* ARABIA.

LABOUR PARTY: *see* POLITICAL PARTIES, BRITISH.

LABRADOR: *see* CANADA.

LABUAN: *see* BRITISH BORNEO.

LACROSSE. The outstanding event of 1950 in men's lacrosse was the tour of England and Scotland for the first time by the lacrosse squad of Yale university. In a series of nine games, all of which they won, they beat a representative

British team at Edinburgh by 9 goals to 5, an English team at Stockport by 9 goals to 5 and another English team at Hove by 10 goals to 5. At Oxford, where they were entertained at Brasenose college, they beat a combined Oxford and Cambridge universities' team by 17 goals to 4. Other games against Manchester university, the English universities, Cheshire, Lancashire and the South of England completed a memorable tour. Civic receptions in honour of the visitors were held at Edinburgh, Manchester, Stockport and Hove.

In the annual programme of tournaments organized by the All England Ladies' Lacrosse association, England maintained a successful record by defeating Ireland, Wales and Scotland. Three schools' tournaments held at the end of March, in which 60 teams competed, demonstrated the growing popularity of lacrosse in girls' schools and ladies' colleges. Westonbirt won the first day's tournament, Queen Anne's the second; and St. Mary's, Calne, and Newbury County Grammar school tied on the third day. (G. H. BA.)

LAND REFORM: *see* PEASANT MOVEMENT.

LAOS: *see* INDO-CHINA.

LATVIA. From Nov. 18, 1918, to Aug. 5, 1940, when it was annexed by the U.S.S.R., Latvia was an independent republic. The British, U.S. and other governments, however, did not recognize the annexation. Area: 25,395 sq.mi. Pop.: (1939 est.) 1,994,500; (1950 est.) 2,100,000. Nationalities (1939 est.): Latvian 75·5%, Russian and Byelorussian 11·9%, Jewish 4·8%, German 3·2%, Polish 2·5%, others 2·1%. Religion (1939 est.): Lutheran 56·6%, Roman Catholic 23·7%, Greek Orthodox 8·9%, Jewish 4·9%, others 5·9%. Chief towns: Riga (cap., pop. 1939 est., 393,211); Liepaja (1935 census, 57,098). Chairman of the presidium of the Supreme Soviet of the Latvian S.S.R., August M. Kirchensteins; chairman of the council of ministers, Vilis T. Lacis.

History. " From the point of view of historic events and transformations and of the tempo of the economic and cultural achievements of the republic, the last decade was for the Latvian nation as important as a century," wrote Lacis in *Izvestia* on July 21. The following day the Soviet press published a letter addressed to Stalin by the Latvian working people expressing satisfaction that Latvia as " a puppet state in the hands of the imperialists " had ceased to exist in 1940. Other changes during the decade included the reduction of the number of Latvians, it was estimated from 1,496,000 to 1,222,000, which meant that by 1950 they represented only 58% of the alleged total population against 75·5% in 1939. According to an advertisement in *Cina*, the mouthpiece of the Latvian Communist party, on Aug. 9, out of 15 secondary schools of Riga tuition in 9 was in Russian, in 2 in both Russian and Latvian and in 4 was only in Latvian.

In March a purge of the Latvian Communist party was directed by Mikhail G. Pervukhin, a deputy prime minister of the Soviet Union. The number of native members of the party was said to be reduced to 2,500 and that of candidates to 2,000. In September and October four members of the government were dismissed for " bourgeois nationalism." They were: Serghey N. Gulanitsky, deputy prime minister; Peteris I. Valeskalns, foreign minister; Karlis Strazdins, minister of education, and N. Sakss, minister for forestry. Ivan P. Ostrov, a Russian deputy prime minister, took over the Ministry of Foreign Affairs; Vilis Samsons, a Russified Latvian and Soviet guerrilla leader during World War II, became minister of education. On Nov. 21 *Cina* had warned Kirchensteins himself about showing tendencies towards " bourgeois nationalism."

By March 1 there were 4,115 *kolkhozy* or collective farms, but by mid-August this number had been reduced to 1,908, and it was expected to decrease further by the amalgamation of smaller *kolkhozy* into bigger ones. The proportion of peasant property collectivized was 95%. On Sept. 8 an article severely admonishing peasants slow in delivering the harvest to the state appeared in *Cina*. A month later, however, J. Kalnberzins, first secretary of the central committee of the Latvian Communist party, was able to report to Stalin that deliveries exceeded the targets.

In connection with the tenth anniversary celebrations it was announced that 90,000 sq.m. of housing space had been built in Riga since 1945, as compared with 170,000 sq.m. totally destroyed during World War II and 220,000 sq.m. of housing built in Riga during 1934-38.

On Jan. 31 a new administrative division of the country, based on the Soviet pattern, was introduced: 58 *rayons* were to supersede the 19 districts into which Latvia had been divided. In the elections of March 12 to the all-union parliament 1,358,294 (99·94%) out of a possible 1,359,051 electors cast their votes: Latvia elected 7 members to the Supreme Soviet (including General Ivan H. Bagramian, commander of the Baltic military area) and 25 to the Soviet of Nationalities (among them Ilya Ehrenburg, born in Kiev and never a resident of Latvia).

Education. In 1950 there were 282,000 pupils in elementary and secondary schools and 27,000 students in 66 technical schools and 10 institutions of higher education.

Finance. Budget (million roubles): (1949 est.) 1,572·4, expenditure 1,477·9; (1950 est.) revenue 1,470·1, expenditure 1,420·1.

See *Newsletter from Behind the Iron Curtain* compiled by the *Baltic Review*, Stockholm. (K. SM.)

LAW AND LEGISLATION. Legislation in the British imperial parliament during 1950 naturally reflected the prevailing political conditions: the standstill before the general election of February, and the stalemate resulting from the even state of the parties in the new House of Commons thereafter. While some interesting topics of constitutional doctrine were discussed in several of the parliaments of the Commonwealth, there was no departure of outstanding importance.

United Kingdom Legislation. The latter months of 1949 saw the royal assent granted to, among other measures, the British North America (No. 2) act, 1949, the Parliament act, 1949, and the Law Reform (Miscellaneous Provisions) act, 1949. The main effect of the Parliament act was to reduce the period during which the House of Lords had power to delay legislation from three sessions and two years, as fixed by the Parliament act of 1911, to two sessions and one year, operating retrospectively to the session of 1947-48 when the measure was first introduced. Thus there passed into law one of the most controversial constitutional measures of modern times, fiercely debated in the Commons and three times rejected in the Lords until it was finally passed under the machinery of the 1911 Parliament act which it amended. Whether its ultimate importance would be found equal to its capacity for engendering controversy remains to be seen. The British North America (No. 2) act was, on the contrary, a wholly uncontroversial measure designed to enable the Parliament of Canada to amend (with some reservations) the Canadian constitution, a further step in the constitutional decentralization of the Commonwealth.

The third measure mentioned above, the Law Reform (Miscellaneous Provisions) act, 1949, made a series of important changes in the law relating to divorce and other matrimonial proceedings. Perhaps the most important of these were: (1) the extension, by section 1, of the jurisdiction of the High Court in England to hear and adjudicate upon a wife's petition for divorce, notwithstanding that the husband was not domiciled in England, if the wife was resident there and had been ordinarily resident there for a period of three years immediately preceding the commencement of the

proceedings and the husband was not domiciled in any other part of the United Kingdom or in the Channel Islands or in the Isle of Man; (2) the provision, by section 4, that where a decree of nullity was granted in respect of a marriage that was voidable (as distinct from being void from the beginning), the children born to such a marriage should not necessarily be deemed illegitimate; and (3) the overruling by parliament, under section 7, of the judicial rule known as the rule in *Russell* v. *Russell* whereby the evidence of a spouse was not admissible to prove that marital intercourse did or did not take place between them during any period.

The legislation brought before the new parliament was not of more than second-rate importance, though much of it was extremely useful. One such measure was the Colonial and Other Territories (Divorce Jurisdiction) act, extending the power of courts in certain countries of the Commonwealth to grant decrees for dissolution of marriage to persons resident (but not domiciled) in those countries by bringing British subjects domiciled in Northern Ireland within the categories of persons who could be so divorced and conferring such powers for the first time on the courts of protectorates, protected states and United Kingdom trust territories. Another measure dealing with the legal aspect of international relations was the International Organisations (Immunities and Privileges) act, giving the crown power to confer by order-in-council diplomatic privileges on members of organizations declared by order-in-council to be organizations of which the United Kingdom and one or more other sovereign powers (or their governments) are members; and on judges, officials, advocates and suitors of the International Court of Justice.

A measure different in character, but similar in scope, was the Medical act, one of whose principal objects was to secure that medical practitioners should not in future be granted full registration without proof of adequate medical experience. This act also made certain alterations in the constitution of the General Medical council, increasing the numbers of elected members and conferring a right of appeal to the Judicial Committee of the Privy Council on practitioners whose names the General Medical council had directed to be erased from the medical register. Other legislation calling for mention in the sphere of legal relations and legal organization included the High Court and County Court Judges act, more fully discussed under a separate head, and a number of measures consolidating previous acts, such as the Matrimonial Causes act, the Adoption act, the Arbitration act and the Shops act.

On Oct. 2, 1950, there came into force in England certain parts of the Legal Aid and Advice act, 1949, namely those relating to proceedings in the Supreme Court of Judicature or remitted from it to the Mayor's and City of London court or to any county court; and to proceedings before any person to whom a case is referred in whole or in part by the Supreme Court, or by the Mayor's and City of London court or any county court if the case was remitted to such court by the Supreme Court. Thus was inaugurated a notable experiment in providing a public legal service administered by the legal profession itself.

Commonwealth Legislation. A bill, known as the District Courts (Amendment) bill, was before the Commonwealth parliament of Australia with the object of enlarging the jurisdiction of the district courts—somewhat analogous with that of the proposals made in the United Kingdom for extending the jurisdiction of the county courts, since both sets of proposals derived, no doubt, partly from the decreased purchasing power of money but also partly from increased confidence in the lower courts and from pressure to reduce the cost of litigation. The main features of this Australian bill were the proposed increase in the common law jurisdiction from the limit of £400 to £1,000 and the conferment of a limited jurisdiction in equity and divorce.



The Lord Chief Justice, Lord Goddard, giving the traditional horseshoe to the Lord of the Manor, when he presided at the Oakham assizes, Rutland, Feb. 1950.

In Canada, while there was some interesting discussion of the procedure for amending the constitution, the principal measure under consideration was a proposal following on the British North America (No. 2) act, 1949, to group the provisions of the British North America acts, 1867-1949, and other constitutional acts under two heads; viz., (1) provisions concerning parliament, the legislature of the dominion, only and (2) provisions concerning the provincial legislatures only. It was proposed that measures in the first category should be amended by acts of the parliament of Canada and that measures in the second should be amended by acts of the provincial legislatures.

In Ceylon the most notable constitutional proposals were contained in the Constitution (Amendment) bill, which aimed at the removal of certain disqualifications preventing citizens of the British Commonwealth who were not citizens of Ceylon from sitting in the Ceylon legislature. These proposals encountered strong opposition based on the lack of reciprocity in certain other parts of the Commonwealth, and failed to secure the two-thirds majority which, since the bill was a constitutional measure, was necessary.

In India the new constitution, keenly debated in the previous year, came into force; and on Jan. 26 the republic of India was inaugurated by proclamation of the governor-general, Chakravarti Rajagopalachari, with Rajendra Prasad as the first president. In Pakistan the process of constitution-building continued with the presentation to the Constituent Assembly in September of the interim reports of the Basic Principles committee and the Committee on the Fundamental Rights of Citizens.

In South Africa, following the recent example of Canada, appeals from the courts of the dominion, which for some time had fallen virtually into desuetude, were formally abolished. In Southern Rhodesia a select committee was appointed to consider constitutional changes, the main topics canvassed being the inauguration of a second chamber and the autonomous conduct of foreign affairs and defence matters.

United Kingdom Case Law. Amid the welter of cases that the modern technique of law-reporting makes available to

the student and the professional reader, it was more difficult than it would have been in former days to select those of such pre-eminent importance as to warrant mention here.

International Law. An extremely interesting action was brought in the Chancery division and heard by Mr. Justice Vaisey, under the name of *Republic of Italy* v. *Hambros Bank Ltd., and Gregory* (*Custodian of Enemy Property*), (1950 Weekly Notes 102) and arising out of the treaty of peace concluded in 1947 between the United Kingdom, amongst other signatory powers, and Italy. Article 79 of this treaty authorized the United Kingdom to seize or take any other action with regard to all property, rights or interests which, on the coming into force of the treaty, were within its territory and belonged to Italy or to Italian nationals and to apply the property or proceeds thereof to such purposes as it might desire within the limits of its claims and those of its nationals. Italian property or the proceeds thereof, in excess of such claims, was to be returned. The liquidation and disposition of Italian property was to be carried out in accordance with the law of the United Kingdom, and the Italian owner of such property was to have no rights except those conferred by that law. Later in the same year a financial agreement was concluded between the parties concerning the liquidation and disposition of Italian property held by the custodian of enemy property as belonging to Italy or Italian nationals. In the action the republic of Italy claimed that the terms of the financial agreement impressed certain assets in the United Kingdom formerly belonging to King Victor Emmanuel III of Italy with a certain trust or fiduciary obligation in respect of which the republic was the beneficiary and which it sought to enforce against the bank and the custodian. Mr. Justice Vaisey stated that the question was whether the terms of the financial agreement were or were not justiciable or cognizable in the courts of England, as forming part of its municipal or domestic law, or whether that agreement was the outcome of a negotiation resulting in a treaty placed apart from and above the general law, and so outside the purview of the court; he held that the financial agreement was in substance a treaty and that the court could not take cognizance of it. Neither of the two defendants, the learned judge pointed out, was a party to the agreement, and the British government, which was a party, was not a defendant. On a subsequent application in the Chancery division, Mr. Justice Wynn Parry authorized Hambros bank, as administrators of the United Kingdom estate of King Victor Emmanuel, to hand over the assets of the estate valued at over £1 million to the heirs of the late king, subject to the provisions of the Exchange Control act.

The doctrine of the immunity of one sovereign or state from being sued in the courts of another, raised in *Krajina* v. *Tass Agency* (1949 2 All England Reports 274) came to the forefront again in *Dollfus Mieg* v. *Bank of England* (66 Times Law Reports 675), and though in the event this case was decided in the Court of Appeal on a question of fact, the master of the rolls expressed his fears that the doctrine had been pushed too far—a matter of particular interest in view of the appointment by the lord chancellor, following the Tass agency case, of a committee under Lord Justice Somervell to consider the doctrine's proper limits.

A decision of great human interest as well as of some importance as an instance of the application of a well-known rule was given by the Court of Appeal in *Kenward* v. *Kenward* (66 Times Law Reports, part 2, 150). This was one of a series of cases in which English husbands who had married Russian wives while stationed in the Soviet Union sought to have their marriages annulled, the Soviet authorities not permitting the wives to leave their country of origin. The court here held that it was possible to infer from the whole conduct of the Russian authorities that they took the view that marriages between British men and Russian women were not marriages to which the smallest regard would thereafter be paid. Therefore the absence of certain formalities was at the root of the matter, and the so-called marriage was never a marriage that the court would recognize because it never conformed with the law of the place where it was celebrated.

Another case arising out of the tangle of wartime and postwar international relationships was *Boguslawski* v. *Gdynia Ameryka Linie* (1950 Weekly Notes 335). This decision of the Court of Appeal, affirming Mr. Justice Finnemore, illustrated a limitation to the principle that the recognition by the United Kingdom government of a foreign government had retroactive effect where the question at issue was the validity of acts done by the foreign government in territory indisputably under its *de facto* control, in that the court held it to have no application to transactions effected in this country at a time when the government from whom recognition was later withdrawn in favour of its successor still enjoyed recognition. In this case an offer had been made by the Polish government in London that had been recognized during the war to seamen who should feel compelled to leave their ships on a change of government. The Foreign Office certified that the former Polish government had been recognized until midnight of the night of July 5-6, 1945, and the new government thereafter. The court held that the new government was bound by the acts of the old until it rescinded or repudiated them and that, even if this act on the part of the old government was an offer and not a contract, until it was withdrawn it could be accepted and so a contract constituted.

Municipal Law. The decision of the Judicial Committee of the Privy Council in the *Canadian Pacific Railway* v. *Attorney General for British Columbia* (66 Times Law Reports 34) was of some interest: the committee held that a hotel, owned and operated by the railway company for the benefit of the general public as well as for travellers was not a part of their railway undertaking connecting British Columbia with other provinces and so was not within the legislative competence of the Dominion of Canada under the British North America Acts; and that the hotel and the hours of work in it were within the legislative sphere of the province.

Two other Privy Council decisions of considerable importance on cases coming from the Commonwealth were *Ali* v. *Jayaratne* (1950 Weekly Notes 363) and *Gideon Nkambule* v. *Rex* (1950 Appeal Cases 379). The former, which came to the committee from Ceylon, arose out of the wording of regulation 62 of the Ceylon Defence (Control of Textiles) regulations, 1945, and its importance lay in the limitation that it put upon the effect of the House of Lords decision in the well-known case of *Liversidge* v. *Anderson* (1942 Appeal Cases 206). In the words of Lord Radcliffe, who gave the committee's decision :

> " It would be impossible to consider the significance of such words as, ' where the Controller has reasonable grounds to believe ' without taking account of the decision of the House of Lords in *Liversidge* v. *Anderson* . . . which directly involved a question as to the meaning of the words, ' if the Secretary of State has reasonable cause to believe any person to be of hostile origins or associations ' . . . And the decision of the majority of the House did lay down that those words in that context meant no more than that the Secretary of State had honestly to suppose that he had reasonable cause to believe the required thing. On that basis, granted good faith, the maker of the order appeared to be the only possible judge of the conditions of his own jurisdiction."

The committee did not adopt a similar construction of the words in regulation 52 which were then before them and Lord Radcliffe went on to emphasize that there was no general rule of construction that similar words should be so construed as they were in *Liversidge* v. *Anderson.*

In Nkambule's case the Judicial Committee stated the rule on which they act in following their own previous decisions,

namely that there is no strict rule that they are bound by a previous decision based on the same considerations, but that a decision on a given set of facts ought not to be re-opened without the greatest hesitation. There was also, in *R.* v. *Taylor* (66 Times Law Reports 1182), an extremely important statement by the lord chief justice of circumstances in which the Court of Criminal Appeal was not bound by its previous decision. In Lord Goddard's words (at p. 1183):

"The Court of Criminal Appeal usually considers itself bound by its own decisions or by decisions of a court of co-ordinate jurisdiction . . . The House of Lords, also, always considers itself bound by its own decisions. In civil matters it is essential, in order to preserve the rule of *stare decisis*, that that should be so; but this court is concerned with the liberty of the subject, and if in the opinion of a full court the law in a particular case had been either misapplied or misunderstood, and as a result of following that decision a person has been sentenced for an offence and imprisoned for it, it would be its bounden duty to reconsider the earlier decision and determine whether that person had been properly convicted."

In a third case, *Nicholas* v. *Penny* (66 Times Law Reports 1122) the Divisional Court refused to follow a previous decision on the ground that this had not been fully argued on both sides. Thus it might not be exaggerated to suggest that in 1950 the doctrine that English courts are bound by their previous decisions had fallen a little below its high-water mark.

In the sphere of municipal private law, it is impossible to do more than touch on a few interesting decisions. One of the most important, perhaps, was the decision of the Court of Appeal in *British Movietonews Ltd.* v. *London and District Cinemas Ltd.* (66 Times Law Reports, part 2, 203) where the court, appearing to push the doctrine of frustration of contract a little further than hitherto, held it to apply to an "uncontemplated turn of events." There had been several interesting discussions on the standard of proof required in divorce cases, notably in *Bater* v. *Bater* (1950 2 All England Reports 458) where Lord Justice Denning analysed the phrase "reasonable doubt" and the differences in its application respectively to civil and criminal matters. And the Court of Criminal Appeal showed its anxiety to maintain a proper procedure in criminal trials by quashing a conviction on the ground of the judge's failure to read in open court a communication from judge to jury, although the former had already discussed the questions involved in his summing-up. (*R.* v. *Green*, 66 Times Law Reports 64). (W. T. Ws.)

Reports cited: All England Law Reports, London; Times Law Reports, London; Weekly Notes, Law Reports (Appeal Cases), Incorporated Council of Law Reporting for England and Wales, London.

United States. *Aliens and Citizenship* The exclusion from the United States by order of the attorney general of the German-born wife of a U.S. war veteran for security reasons was a proper exercise of executive power unaffected by the War Brides act Nor could the exclusion order be reviewed by the courts. The barring of aliens was an act of sovereignty to be carried out by the executive department as part of its control of foreign affairs (*Knauff* v. *Shaughnessy*, 338 U.S. 537). An alien who had succeeded in entering the U.S., however, was entitled to the kind of hearing prescribed by law. The Supreme Court said that a native of China, ordered to be deported for unlawful entry, should have another chance because his case had been heard before an immigrant inspector who also investigated similar cases. This combination of functions violated the rules laid down by the Administrative Procedure act, which applied since the Immigration act did not specify how such hearings should be conducted (*Sung* v. *McGrath*, 339 U.S. 33).

Armed Forces. An attack upon the legality of court-martial proceedings on behalf of a soldier, convicted of rape, on the ground that the issue of his insanity had not been properly treated was rejected by the Supreme Court. All that was required was that this issue should be considered at some time during the proceedings, which had been done. The right to trial by jury guaranteed by the federal constitution did not apply to military trials (*Whelchel* v. *McDonald*, 340 U.S. 122).

Members of the armed forces could not maintain suits against the U.S. under the Tort Claims act for injuries sustained while on active duty resulting from the negligence of other servicemen (*Feres* v. *U.S.*, 340 U.S. 135). The court pointed out that its 1949 ruling in *Brooks* v. *U.S.*, 335 U.S. 901, permitted suits against the government by service personnel only for injuries suffered while off duty. Congress had provided other means of compensation for injuries and death connected with active duty.

Civil Rights. The Supreme Court condemned racial segregation on railway dining cars as a violation of section 3 (1) of the Interstate Commerce act, which made it unlawful for a railway to subject any person "to any undue or unreasonable prejudice or disadvantage." Rules limiting Negroes to the use of two tables curtained off from the rest of the dining car and compelling them to wait for vacancies at those tables constituted such disadvantage (*Henderson* v. *U.S.*, 339 U.S. 816).

In two other cases the court construed the equal protection clause of the 14th amendment as meaning literally "equal" when applied to the facilities of state-administered professional and graduate schools. The contentions of a Negro, who had been denied admission to the University of Texas law school, that a special law school for Negroes did not offer educational opportunities equivalent to those available to white students were sustained by the High Court (*Sweatt* v. *Painter*, 339 U.S. 629). At the instance of a Negro professor, engaged in graduate study, the court also directed the University of Oklahoma to treat Negroes in the same way as white students. Assigning Negroes to a separate row of seats in a classroom or to a designated table in the library or cafeteria did not satisfy constitutional requirements (*McLaurin* v. *Oklahoma Regents*, 339 U.S. 637). Although the court did not expressly repudiate the "separate but equal" doctrine it definitely narrowed it.

A new phase of censorship was approved by the Supreme Court in a decision that section 245 of the federal criminal code, which made illegal the inter-state delivery of any "obscene book, pamphlet, picture, motion-picture film, paper, letter, writing, print or other matter of indecent character," applied to obscene gramophone records. The defence that the ban was intended to apply only "to objects comprehensible by sight" was rejected by the court (*U.S.* v. *Alpers*, 338 U.S. 680).

Criminal Law. The 1949 conviction of 11 Communist leaders for conspiring to use their party to advocate the violent overthrow of the U.S. government was affirmed by the second circuit court of appeals in a 66-page opinion by Chief Judge Learned Hand. The Supreme Court agreed to review the case solely on the question of the validity of the peacetime sedition law under which they were convicted.

Several High Court decisions dealt with the contempt powers of congressional committees. In a four-to-three decision the court upheld the power of the Un-American Activities committee to hold a member of the executive board of a voluntary association in contempt for failure to produce the group's records in answer to a subpoena. The plea that the records were under the control of the executive secretary and that compliance with the subpoena would require the co-operation of other members of the executive board was no defence (*U.S.* v. *Fleischman*, 339 U.S. 349). Nor could the refusal of the executive secretary of the Joint Anti-Fascist Refugee committee to produce the records of her organization before the same committee be justified on the grounds that a quorum of the committee was not present at the time set

for her appearance as a witness, since she had not raised that point at the hearing. The court distinguished its 1949 ruling in the Harold R. Christoffel case as inapplicable because it arose upon the construction of a dissimilar statute. (*U.S.* v. *Bryan*, 339 U.S. 323).

The general secretary of the U.S. Communist party found the Supreme Court cold to his contention that the jury which convicted him of contempt for failing to appear before the Un-American Activities committee was not "impartial," as guaranteed by the 6th amendment, because it included federal employees (*Dennis* v. *U S.*, 339 U.S. 162). The executive director of the National Council of American-Soviet Friendship, however, succeeded in getting his contempt conviction reversed because the trial judge had denied his lawyer an opportunity to ask prospective jurors, who were on the government payroll, whether a so-called "loyalty order" would affect their ability to render an impartial verdict (*Morford* v. *U.S.*, 339 U.S. 258).

The court held that due process had been satisfied when Georgia's governor, on the advice of three physicians, ruled that a convicted murderer was sane and thereby confirmed his death sentence, although the state law made no provision for judicial review of such decisions (*Solesbee* v. *Balkcom*, 339 U.S. 9).

The murder conviction of a Negro was reversed on the ground that his motion to quash the indictment should have been granted because Negroes had been discriminated against in selecting the grand jury. Although 15·5% of the population of the county were Negroes, there had never been more than one Negro on any grand jury during a period of five and a half years. The 14th amendment prohibited racial discrimination in selecting grand juries (*Cassell* v. *Texas*, 339 U.S. 282).

Internal Security Act. Congress created a three-pronged weapon against subversive activities through the passage of the much-debated McCarran act, which required the registration of organized Communists and fellow travellers, denied them citizenship and gave the attorney general emergency powers to detain persons suspected of planning to spy or commit sabotage. Under Title I, known as the Subversive Activities Control act of 1950, Communist-action and Communist-front organizations had to list their officers and submit accounts of their receipts and disbursements to the attorney general. Action groups had also to list their members. Registered organizations were denied tax deductions and exemptions. Their members were barred from federal posts and denied passports. Such organizations had to label all mail and broadcasts as sponsored by a Communist organization. Failure to register was punishable by fine not to exceed $10,000 and imprisonment not to exceed ten years. Title I also amended various statutes relating to immigration and naturalization. It excluded from entry into the U.S. all aliens who were, or had ever been, members of the Communist party or of any organization required to register. Resident aliens, who had been in any of the excludable categories within ten years prior to filing a petition for naturalization, had to be denied citizenship. His joining of a registered organization within five years after naturalization created a presumption that the alien was not attached to the principles of the U.S. constitution and if not rebutted by other evidence would warrant the naturalization's being rescinded.

Title II, known as the Emergency Detention act of 1950, empowered the attorney general, in the event of invasion, declaration of war or insurrection within the U.S. in aid of a foreign enemy, to detain any person whom it was believed might engage in espionage or sabotage. Membership in the Communist party after Jan. 1, 1949, might be considered in deciding the existence of reasonable grounds for detention.

Labour. In three cases arising on the west coast, the Supreme Court approved injunctions granted by state courts against picketing. A transport drivers' union had been properly restrained from trying to force a garage owner, who operated without employees, to comply with union rules (*Teamsters Union* v. *Hanke*, 339 U.S. 470). Nor was a building service employees' union justified in picketing a hotel owner in an effort to compel him to sign a union shop agreement when his employees did not want to join the union. (*Building Service Union* v. *Gazzam*, 339 U.S. 532). Similarly, an injunction against the picketing of a grocery store by a group called the Progressive Citizens of America in order to force the proprietor to employ Negro assistants in proportion to his Negro customers was not a violation of the right to free speech (*Hughes* v. *Superior Court*, 339 U.S. 460).

(M. DN.)

LAWN TENNIS. The great event of the 1950 lawn tennis season was the victory of Australia over the United States in the challenge round of the Davis cup. The last time that Australia won the cup was in 1939, on the eve of the outbreak of World War II. The United States immediately won it back again the first year after the war in 1946 and retained it until 1950.

The men's singles championship at Wimbledon was won by Budge Patty (U.S.) for the first time: in the final he beat F. Sedgman (Australia), who had been very nearly beaten in the semi-final by A. Larsen (the winner, later in the year, of the U.S. championship).

The women's singles championship at Wimbledon was won by Miss Louise Brough (U.S.) for the third successive year: in the final she beat Mrs. M. du Pont (U.S.) who subsequently won the U.S. championship.

LAWN TENNIS AMATEUR WORLD RANKING (FIRST TEN), 1950

Men	Women
1. B. Patty (U.S.)	1. Mrs. M. du Pont (U.S.)
2. F. Sedgman (Australia)	2. Miss L. Brough (U.S.)
3. A. Larsen (U.S.)	3. Miss D. Hart (U.S.)
4. J. Drobny	4. Mrs. P. C. Todd (U.S.)
5. H. Flam (U.S.)	5. Miss B. Scofield (U.S.)
6. F. R. Schroeder (U.S.)	6. Miss N. C. Chaffee (U.S.)
7. V. Seixas (U.S.)	7. Mrs. B. B. Beckett (U.S.)
8. K. McGregor (Australia)	8. Miss S. Fry (U.S.)
9. W. F. Talbert (U.S.)	9. Mrs. A. Bossi (Italy)
10. E. W. Sturgess (S. Africa)	10. Mrs. H. Weiss (Argentina)

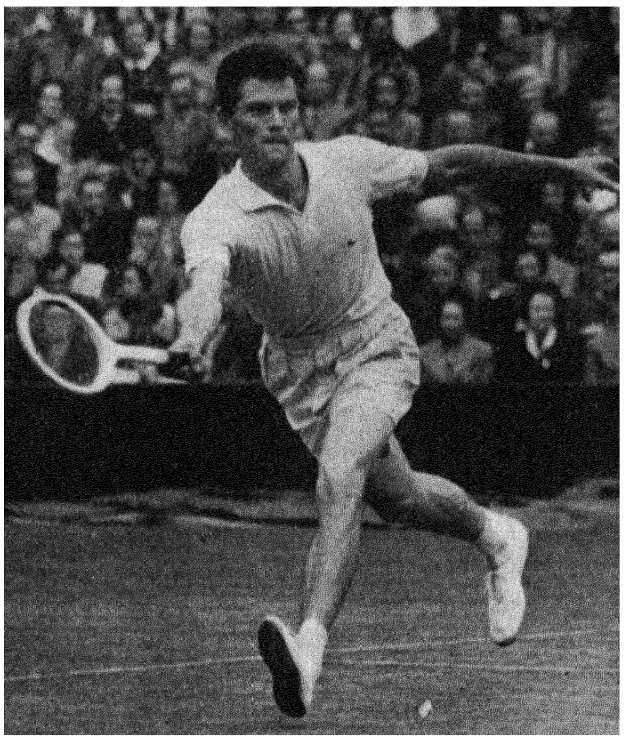
No English player was included in either list but if Mrs. B. E. Hilton had played through the whole season instead of retiring after Wimbledon, when she married A. C. Harrison, she would almost certainly have been included. She played extremely well in the Wightman cup at Wimbledon, which the United States ladies won by 7 matches to 0. Mrs. Harrison was only beaten 7-5 in the final set by the Wimbledon champion, Miss Brough.

The United States having held the Wightman cup since 1930, a proposal was made to invite international ladies' teams from other countries besides Great Britain and the United States to compete for it.

England had a poor season. They were beaten in the first round of the Davis cup by Italy and lost the Wightman cup 7-0. None of their players appeared in any of the finals at Wimbledon. However England's A. J. Mottram played well in the Wimbledon championships: he beat one notable American, T. Trabert, and was only beaten in the fifth set by the Australian double-handed player Geoffrey Brown.

England sent a team consisting of Mottram, Mrs. Mottram (formerly Miss Joy Gannon), J. A. T. Horn and Miss J. S. V. Partridge, to compete in the United States championships. Horn and Miss Partridge benefited greatly by the tour.

Perhaps the most notable features of the championship game of 1950 were the victory of Budge Patty at Wimbledon and the rise of two new young American stars, Larsen and



Budge Patty (United States) who won the men's singles title at Wimbledon in July 1950.

Flam. Patty's achievement included victories over Talbert, Seixas and Sedgman which, coupled with his earlier victory in the French championships, made him the outstanding player of 1950.

The British hard court and covered court championships were won by J. Drobny, formerly of Czechoslovakia: in the final of the former he beat G. E. Brown (Australia) and in the final of the latter he beat G. L. Paish, who had beaten the holder J. Borotra (France) in the semi-final.

Miss J. Curry very nearly succeeded in also winning both the ladies' singles championships: she won the hard court championship by beating Mrs. H. Weiss (Argentina) in the final and she had led 6-3, 5-4, 40-15 (two match points) against Miss J. Quertier in the final of the covered court championship before Miss Quertier eventually beat her.

The principal championship on the European continent was the French national championship played at the Stade Roland Garros, Auteuil, Paris, in May. Budge Patty won the men's singles after surviving two tremendous five-set matches against W. F. Talbert (U.S.) and J. Drobny. The women's singles was won by Miss Doris Hart (U.S.), who had now been the winner of every important national championship in the world except Wimbledon and the U.S. championship. In 1950 she beat Miss L. Brough, the Wimbledon champion, three times and Mrs. M. du Pont, the U.S. champion, twice; her only defeats came from Miss Brough at Wimbledon and Mrs. du Pont in the U.S. championships. (J. OF.)

United States. The year 1950 saw 26 nations challenging the U.S. for the Davis cup. The challenge round was played at the West Side Tennis club stadium, Forest Hills, New York, late in August. When Frank Sedgman beat Thomas P. Brown, Jr., of California and 21-year-old Kenneth McGregor gave Frederick R. (Ted) Schroeder, Jr., another Californian, his first Davis cup defeat, the stage was set for Australia's victory. The victory was sealed on the second day as the Australian doubles team, Sedgman and John Bromwich, defeated Schroeder and Gardnar Mulloy of Florida in a hard-fought five-set match. On the final day Sedgman trounced Schroeder in straight sets, but Brown saved the U.S. from being whitewashed by winning a thrilling uphill battle from McGregor, 9-11, 8-10, 11-9, 6-1, 6-4.

J. Edward (Budge) Patty, California, won the French championship by beating Jaroslav Drobny (Egypt) in a five-set final and defeated Sedgman at Wimbledon to capture the British title. A sprained ankle kept Patty out of the Davis cup competition and the U.S. championships. Arthur Larsen, a left-hander, also from California, captured the U.S. title by defeating Herbert Flam, 6-3, 4-6, 5-7, 6-4, 6-3. The championship was played as usual at Forest Hills early in September. Larsen also beat Flam again a few weeks later to win the U.S. Hard Court championship played at the Berkeley (California) Tennis club. Flam nevertheless won the National Intercollegiate singles and doubles (with Eugene Garrett) and the U.S. Clay Court singles, crushing Schroeder 6-1, 6-2, 6-2, and (with Larsen) taking the doubles from Schroeder and Tony Trabert of Cincinnati, Ohio. Nineteen-year-old Trabert won the French doubles with William F. Talbert of New York. The Australians Sedgman and Bromwich won the U.S. doubles championship at the Longwood Cricket club, Brookline, Massachusetts, by defeating Talbert and Mulloy, who had won the title four times.

The U.S. Wightman cup team, Mrs. Margaret Osborne du Pont, Louise Brough, Doris Hart and Mrs. Patricia Canning Todd, overwhelmed their British opponents in seven matches at Wimbledon. The four major championship titles were distributed among Miss Brough, who won the Australian and Wimbledon titles, Miss Hart, who won the French title and was runner-up in the Australian, British and U.S. championships, and Mrs. du Pont, who captured her third successive U.S. title. Mrs. du Pont and Miss Brough took their ninth successive U.S. championship and scored their fourth Wimbledon doubles victory. (E. S. BR.)

LEARNED SOCIETIES: *see* SOCIETIES, LEARNED AND PROFESSIONAL.

LEATHER. Hide-buying passed out of the hands of the government into those of tanners on Dec. 31, 1949 and a rising world market and the devaluation of sterling made it clear that there was little chance of realizing the hope that private buying would result in lower prices. Both the supply situation and currency difficulties forced an opposite trend. There were still government-purchased supplies arriving early in the year and these were issued to tanners at figures midway between old prices and current quotations. The tanners operated cautiously. Demand for leather was steady despite increased prices. As government-purchased hide supplies began to run out it became apparent that the industry would have to think in terms of world values and the rising prices slowed down demand for leather.

On March 13 the system of separate import licences for each consignment of tanned skins ended and trade was covered by open individual licences for imports except from certain sources. Towards the end of that month, there developed a stagnation between tanners and hide prices. Sole leather prices were below replacement value and tanners hesitated to buy more high-priced hides. Argentina proved a little more inclined to dispose of her holdings. The Instituto Argentino de Promoción del Intercambio, the official selling organization, began granting rebates on certain grades of hides bought with free dollars—15% for frigorificas and 11% for good take-offs. At the beginning of June hide prices showed a decline and it was thought that the tide had turned. Tanners would not buy except at lower quotations but that period was short-lived. On June 27 the public auctioning of domestic hides and skins was resumed at six centres—

Manchester, London, Bristol, Birmingham, Glasgow and Leeds —and high prices were realized for calf skins. On June 30 Julian Foley relinquished his position as leather controller. The Control of Leather (Revocation) order, 1950, operative from Aug. 1, provided that licences were no longer needed for the acquisition and use of dressed leather, and the prices of native pelts were increased 50% by the Pelts (Maximum Prices) order, 1950. Tanners by then were paying more for hides which were being driven higher and higher by buying from countries in eastern Europe and by America under the influence of the Korean war. Further increases were notified by Argentina on Aug. 23 and tanners by then had concluded that there was nothing to be gained by postponing purchases. But Argentina suspended sales.

Early in September it was announced that American interests had bought a million hides ahead of kill. Prices had reached a level at which tanners declared they would buy only for their absolute needs. They were finding it difficult to get replacement values for their leather.

Leather control ended on Oct. 1, its remaining functions being transferred to the directorate of sundry materials. In that month there were still further increases of 14% to 25% in Argentine hide quotations. East Indian tanned hide prices also were increased. The hide price index which in 1949 was already three and a half times the 1930 figure had risen to 418% of prewar level even before the Korean war and by mid-September it was standing at 560% of 1938. Tanners had advanced their leather prices in two months by 25% and still were nowhere near getting replacement values. There was some selling of hides by American speculators but no real sign of a break in the market as the year drew to an end. (*See* also SHOE INDUSTRY.) (C. A. SD.)

LEBANON. Independent Arab republic, formerly under French mandate, situated on eastern Mediterranean, bounded by Syria and Israel. Area: 3,475 sq.mi. Pop.: (1942 census) 1,116,000; (1949 est.) 1,208,000. Language: Arabic is the mother tongue of some 90% of the population; but Armenian, Greek and other languages are also spoken. Religion (1947): Christian 52% (Roman Catholic rites: Maronite 332,900, Greco-Melchite 65,400, Armenian 10,300, Syrian 5,000, Latin 3,100 and Chaldean 1,300; Greek Orthodox 111,500; Gregorian Armenian 60,800; Syrian Jacobite 3,700; Protestant 10,600); Moslem 46% (Sunni 240,000; Shia 214,000; Druze 75,800); other 2%. As in the middle east religious ties are often stronger than racial, Lebanon might be described as a state of minorities, no single rite or sect being in a majority. Chief towns (pop. 1946 est.): Beirut (cap., 181,300); Tripoli (84,400); Saida or Sidon (78,800); Zahlé (78,000). President of the republic, Bishara Khalil el Khuri; prime minister, Riad Bey es Sulh.

History. In March the long-standing dispute between Lebanon and Syria over customs came to a head. When the two states declared their independence and the French mandate ended in 1945, the French mandatory policy of a customs union between the two countries was maintained. But Lebanese policy for free trade through Beirut port quickly clashed with the Syrian demand for protective tariffs; on March 13 Syria denounced the convention and on March 18 the Lebanon closed its frontiers to Syrian exports and removed the existing import duties from wheat, butter, cheese, cattle, vegetables, cotton and rice. Simultaneously negotiations were started to open or develop foreign markets for Lebanese exports. Up to the end of the year no solution of the dispute had been found.

In the Arab league the Lebanon associated itself with the protests against the Jordan annexation of Arab Palestine (April 24) and on June 17 signed a collective security pact with Egypt, Saudi Arabia, Syria and the Yemen, and approved a resolution, taken in the absence of Jordan, that until Palestine was "finally liberated," Jordan must regard Arab Palestine as "trust property."

On July 24 the Lebanese government protested to the United Nations against an Israeli attack on one of their civil aircraft which was alleged to have been shot down by an Israeli fighter. Three passengers were killed.

On July 27 the government voted a grant of $50,000 as symbolic assistance to the U.N. forces in Korea.

On March 9 an attempt was made on the prime minister's life by a Syrian of the Nationalist party. Two members of the party were subsequently (May) condemned to death. Six others received prison sentences.

On Jan. 1, 1950, the prime minister formally opened the new oil refinery at Tripoli which had been built by the Iraq Petroleum company to handle the increased supplies made available by the duplication of the original Kirkuk-Tripoli pipeline. Throughout the year the construction of the world's largest oil pipeline, spanning 1,068 mi. between the Persian gulf and Sidon, was energetically pursued. The first oil reached the Lebanese port early in December. Built by the Arabian American Oil company (which owns 315 mi.) and the Trans-Arabian Pipeline company (which owns 753 mi.) its cost amounted to $230 million. It brought the Persian gulf oil 3,500 mi. nearer to European users. (O. Tw.)

Education. Schools (1949): primary 734, pupils 60,019; private 808, pupils 75,475; foreign 279, pupils 53,208; technical and trade 5, pupils 456; universities 2, students 2,147.

Agriculture. Main crops ('000 metric tons, 1947; 1948 in brackets): wheat 50 (50); barley 17 (27); maize 12 (13); oats 2 (2); potatoes 32 (25). Fruit production ('000 metric tons, 1948; 1949 in brackets): grapes 80 (90); olives 35 (35); olive oil 11 (11); oranges and tangerines 37 (37); lemons 3 (3). Livestock ('000 head, 1949 est.): goats 400; sheep 25; cattle 20; horses 10; donkeys 20; mules 5. Wool production (incl. Syria, on greasy basis, '000 metric tons, 1948; 1949 in brackets): 6 (6).

Industry. Production ('000 metric tons, 1948; 1949 in brackets): cotton yarn 8·0 (6·8); cotton textiles 7·0 (6·0); silk and rayon textiles 3·0 (2·6); leather hides and skins 1·8 (2·7); cement 200 (251).

Foreign Trade. (Lebano-Syrian customs union throughout, £L million, 1949; 1950, three months, in brackets) imports 516·2 (116·7); exports 111·1 (37·8). Main sources of imports (1949): U.S. 23·1%; U.K. 20·9%; France 13·7%. Main destinations of exports (1949): Iraq 20·1%; Jordan 19·0%; Italy 11·9%. Main imports (1949): textiles 17·4%; electrical goods and machinery 15·3%; metals 12·2%. Main exports (1949): wheat and wheat flour 24·7%; rayon textiles 9·3%; barley 7·6%.

Transport and Communications. Roads (1949): 1,540 mi. Licensed motor vehicles (Dec. 1949): cars 9,200; commercial 3,600. Railways (1949): 475 mi. Telephones (Jan. 1949): 13,125. Radio receiving sets (1949): 13,000.

Finance and Banking. (£L million) budget: (1949 est.) balanced at 75·0; (1950) balanced at 85·3. Currency circulation (July, 1949; July 1950 in brackets): 170 (183). Bank deposits (June 1950): 210. Monetary unit: Lebanese *pound* with an exchange rate (pre-devaluation, 1949; Nov. 1950 in brackets) of £L 8·85 (6·16) to the pound and £L 2·21 (2·21) to the U.S. dollar.

LEEWARD ISLANDS. British colony composed of four presidencies, a group of islands forming the northern part of the Lesser Antilles in the Caribbean.

	Area (sq.mi.)	Population (1946 census)	Population (1949 est.)
Antigua (with Barbuda)	171	41,757	43,000
St. Christopher and Nevis (St. Kitts-Nevis, with Anguilla)	152	46,243	47,000
Montserrat	32	14,333	14,000
Virgin Islands	67	6,505	6,500
	422	108,838	110,500

Pop.: mainly negro. Religion: Christian, many denominations. Principal towns: St. John (Antigua) (cap., pop. 10,962), Basseterre (St. Christopher) (pop., 12,201). Administration: governor; executive council, 3 *ex officio* and an undetermined number of nominated members; General Legislative Council, 7 *ex officio* members, 8 elected from the presidency legislatures in Antigua, St. Christopher and Nevis

and Montserrat, 1 nominated official and 1 nominated unofficial member from the Virgin Islands; (in the presidencies) administrator, executive council, Legislative Council with unofficial majorities (Virgin Islands Council being restored in 1951). Governors in 1950: Earl Baldwin of Bewdley and (from Sept. 17) K. W. Blackburne.

History. It was announced in June 1950 that the secretary of state for the colonies had agreed to the following constitutional changes in Antigua, St. Kitts-Nevis and Anguilla: the introduction of adult suffrage; the abolition of income, property, rent and tax qualifications for voters; the retention of simple literacy test; the abolition of property and income qualifications for candidates; and the introduction of an advisory non-statutory committee system on various subjects. The lives of these three Legislative Councils were extended until Oct. 31, 1951, to enable the secretary of state to consider further aspects of constitutional reform. Legislation was passed in July to restore the Legislative Council in the Virgin Islands after a lapse of 48 years. The currency act passed by the General Legislative Council in July was designed to implement an agreement between the governments of the eastern Caribbean territories to provide a uniform currency in those territories.

Record crops of sugar were produced in Antigua and St. Kitts, the tonnages being 30,680 and 41,204 respectively. The year was marked by a number of labour disputes in Antigua. A demonstration against the new governor was organized by political elements on his first visit to St. Kitts. He was, however, received with enthusiasm in all the other islands in the group. In August, the colonial secretariat was completely destroyed by fire, and in the succeeding 12 days two hurricanes struck the colony causing great damage in Antigua, Barbuda and Anguilla. In Antigua alone, 1,348 houses were completely destroyed in the two storms, and another 2,343 damaged while the electricity, telephone and water services were all gravely affected. The colony's resources, in both manpower and finance were strained to the utmost by these three disasters in quick succession; but measures for immediate relief were put in hand without delay, and a prompt start was made on longer-term plans of reconstruction. Great help was given to the stricken colony by the other British West Indian colonies, which poured in supplies of food and clothing as soon as communications were restored.

Finance and Trade. Currency: West Indian dollar ($4·80=£1 sterling).

	Revenue (1950 est.)	Expenditure (1950 est.)	Imports (1949)	Exports (1949)
Antigua	$2,369,653	$2,568,933	$4,180,779	$2,951,572
St. Kitts-Nevis	$2,320,250	$2,654,018	$4,801,626	$4,859,936
Montserrat	$620,404	$700,977	$703,142	$867,542
Virgin Islands	$202,208	$286,445	$315,162	$170,601

Principal exports: sugar and cotton. (P. H.-M.)

LEGISLATION: *see* LAW AND LEGISLATION.

LEOPOLD III (LEOPOLD-PHILIPPE-CHARLES-ALBERT-MEINRAD-HUBERTUS-MARIE-MIGUEL DE SAXE-COBOURG), King of the Belgians (b. Brussels, Nov. 3, 1901). On Nov. 10, 1926, he married Princess Astrid of Sweden, who was killed in a motoring accident on Aug. 29, 1935; of this marriage were born Princess Josephine-Charlotte, Prince Baudouin and Prince Albert. Leopold acceded to the throne on Feb. 17, 1934, and became the determining influence in Belgian foreign policy: on Oct. 14, 1936, he proclaimed that Belgium would return to a policy of neutrality. After a courageous though vain resistance by the army, of which he was commander in chief, to the German invasion launched on May 10, 1940, the king capitulated on May 28. Against the views of his government, he decided not to leave his country and retired to the palace of Laeken. On Nov. 14, 1940, he paid a visit to Hitler at Berchtesgaden. On Sept. 11, 1941, he married Mlle. Mary-Liliane Baels, and a son, Alexander, was born on July 18, 1942. On June 7, 1944, Leopold left Brussels with his wife under German escort for internment at Hirschstein, near Dresden (where his children joined him a month later), and from March 6, 1945, at Strobl, near Salzburg. He was liberated on May 8, 1945, by the U.S. 7th army. The Belgian Social Christian party asked for his immediate return, but a section of the Liberals, the Socialists and the Communists advocated his abdication. From the summer of 1945 King Leopold and his family were living at Pregny, near Geneva. Leopold's insistence on his reinstatement created a deadlock and the situation was not clarified either by the result of the Belgian general election of June 25, 1949, or by the referendum of March 12, 1950. The king received 57·68% of the total of valid votes, more than the minimum of 55% which he had laid down as necessary for his return but less than the two-thirds majority demanded by the Socialist party. The pro-Leopold Social Christian party having secured at a new election (June 4) a small absolute majority in both houses, a bill ending the regency of Prince Charles and thereby enabling King Leopold to resume the royal prerogatives was passed on July 20. Two days later Leopold returned to Brussels by air. A critical situation arose of which the only peaceful solution was the king's decision, on Aug. 1, to transfer his prerogatives to Prince Baudouin (*q.v.*). The word "abdication" did not appear in the king's statement.

LEPROSY. After nine years of experience with sulphone drugs in the treatment of leprosy, physicians at the National leprosarium, Carville, Louisiana, reported that drugs which could be administered orally, such as sulphoxone (diazone), thiazosulphone (promizole) and sulphetrone, were preferred and if one drug was not well tolerated another might be substituted. In the patient with lepromatous leprosy who persisted with the treatment a slow but progressive improvement could be expected. Following this clinical improvement there was a slowly progressive reduction in the number of leprosy bacilli demonstrable in smears from the skin or nasal mucous membrane. Some cases eventually reached a stage of maximum improvement with persistent, but greatly reduced, clinical activity. Others no longer had any clinical evidence of activity but leprosy bacilli in reduced numbers could still be recovered from their skin. In some with clinical arrest, bacilli were no longer demonstrated. Of the original group of 16 patients in whom glucosulphone (promin) therapy had been begun nine years before, 9 had taken regular treatments and, of these, 3 still showed positive skin smears though the number of organisms was small.

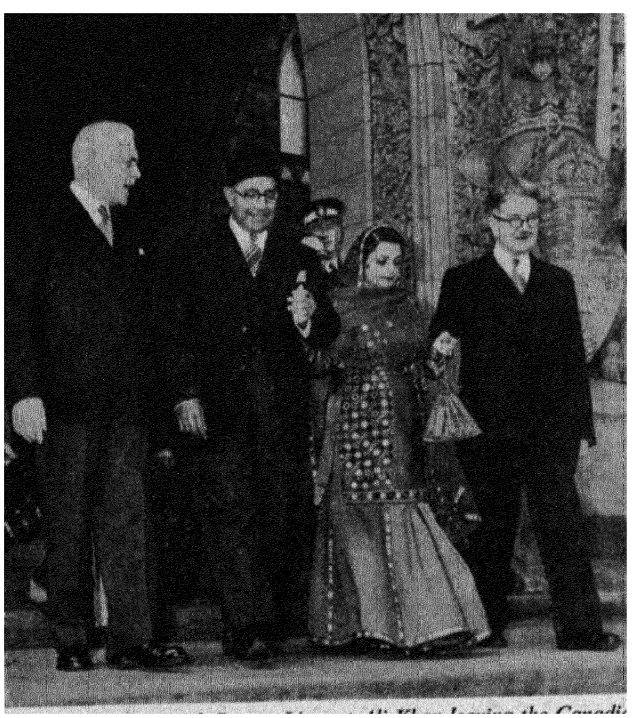
The physicians expressed the opinion that patients who underwent clinical recession of the disease but remained bacteriologically positive must still be regarded as open cases capable of transmitting the infection to others. This hazard might be increased by the fact that patients in whom lesions were no longer easily recognized would be more prone to carry on a normal life and thereby increase the frequency of their contact with non-leprous individuals.

Follow-up study had been possible in 33 patients who after prolonged sulphone therapy had been declared cases of "arrested" leprosy. It was possible to obtain follow-up examinations for periods ranging from six months to five years after the cases had been declared "arrested." Following discharge from the hospital 11 of the 33 "arrested" cases had discontinued the use of the drugs. Five of these experienced a relapse of the disease. Of the 22 who had continued using the drug after "arrest" only 1 relapsed. Although the above numbers were too small for definite conclusions to be drawn, the investigators thought there was a tendency for relapse unless the drug was continued indefinitely.

During the year two reports appeared comparing in serum from leprosy patients the results of several different tests for syphilis when cardiolipin and regular antigen were used in testing the same serum. All these patients were considered non-syphilitic. One laboratory found that the Kolmer complement-fixation test (Wassermann) in 120 serums from leprous patients gave 53·3% positive results when regular antigen was used and only 36·6% positive results when cardiolipin antigen was used. The other laboratory using the same test found that in 225 serums from leprous patients regular antigen gave 44·8% positive and the cardiolipin antigen 62·6% positive, indicating a trend which was the reverse of that obtained in the first laboratory. It therefore appeared that cardiolipin antigen did not aid in solving the problem of serologically differentiating leprosy from syphilis.

(C. H. BD.)

LIAQUAT ALI KHAN, Pakistani statesman (b. Karnal, East Punjab, Oct. 1, 1895) was the son of a wealthy land-owner and was educated at M.A.O. college, Aligarh, and Exeter college, Oxford, where he took a law degree in 1921. He returned to India in 1922 and joined the Moslem league in 1923. He was a member of the United Provinces Legislative Council from 1926 to 1940 when he was elected to the Central Legislative Assembly. He was elected secretary of the Moslem league in 1936 and in 1940 became the deputy leader. He was appointed to the Viceroy's executive council in 1946 and held the portfolio of finance. On Aug. 15, 1947, Mohammed Ali Jinnah appointed him the first prime minister and minister of defence of Pakistan. He attended the Commonwealth conferences in London, 1948 and 1949. During 1950 the sub-continent of India was troubled with severe communal riots mainly in Bengal and the continued dispute between Pakistan and India over Kashmir (*q.v.*). These problems caused Liaquat Ali Khan and Pandit Nehru (*q.v.*) to meet together in Karachi and Delhi a number of times during the year. Liaquat Ali Khan's visit to New Delhi in April was his first to India since Aug. 1947. On April 8 the two prime ministers signed an agreement on minorities. Later in the same month Liaquat Ali Khan welcomed Pandit Nehru to Karachi. On May 3, he arrived in Washington for a tour of the United States and Canada. He underwent an operation in Boston and returned to Karachi on July 13. He visited London on both the outward and return journeys. From July 20 to 24 he was in New Delhi for discussions with Pandit Nehru on the working of the minorities agreement and also for tripartite discussions with Nehru and Sir Owen Dixon (*q.v.*), the United Nations mediator, on Kashmir. On Aug. 23, the day after Dixon had announced his failure to secure agreement, Liaquat Ali Khan stated, "The responsibility lies squarely on the shoulders of India."



Liaquat Ali Khan with Begum Liaquat Ali Khan leaving the Canadian House of Commons in June 1950. On the left is Louis St. Laurent, prime minister of Canada.

LIBERAL MOVEMENT. The outstanding event of the year was the disaster which befell the British Liberal party at the general election on Feb. 23. It had been widely supposed that the reduction in 1945 of Liberal representation in the House of Commons to 12 members had among its principal causes the party's inability to produce more than 307 candidates. Accordingly, every effort was made to put forward as many candidates as possible, even though many of them were forlorn hopes. In the event only 9 out of 475 Liberal candidates were elected and an unprecedented number forfeited their deposits. The parliamentary Liberal party was thus reduced to a somewhat loosely associated handful of members, most of whom had won seats in the Welsh counties by virtue of close personal association with their constituencies. There ensued an inconclusive debate as to whether Liberals would or should vote in future for Labour or Conservative candidates, while the Liberal party organization professed its determination to persevere, undeterred by events.

A few days later, on March 5, a general election was also held in Greece. The result raised hopes of a stable coalition of the centre, but these were frustrated by personal rivalries. The three principal parties of the centre—the Liberal party, the Progressive Centre and the Social Democratic party—secured respectively 56, 45, and 36 seats, while the right wing Populist party won 62. The Liberal leader, Sophocles Venizelos (*q.v.*) formed a government of his own party, to the annoyance of the other centre leaders with whom he had promised to collaborate. This government lasted a few weeks and was followed by a coalition of the centre under General Nikolaos Plastiras (*q.v.*) in which Venizelos nominally served, but later in the year this government split, Plastiras resigned and Venizelos became prime minister in partnership with the Populists (*see* GREECE).

Of greater encouragement to Liberals were events in the neighbouring country of Turkey, which presented to an astonished world the spectacle of a one-party state peacefully achieving transformation to a two-party system. In elections held on May 14 the opposition, led by Celâl Bayar (*q.v.*), won 407 out of 486 seats, and the ceremonies and speeches which subsequently marked the yielding of office by President Ismet Inönü and others suggested that Turkey was fortifying itself by its own efforts, and might yet save its neighbours by its example.

In France, the Radicals continued to take part in government but in Italy the Liberal party ceased to do so. Georges Bidault, abandoned by the French Socialists early in the year, brought more Radicals into his cabinet, including Henri Queuille at the Ministry of the Interior. When Bidault was defeated in June Queuille succeeded him. His government, however, did not last long and he was, in turn, succeeded by René Pleven in whose cabinet Radicals continued to sit (*see* FRANCE). In Italy Alcide De Gasperi formed a new government in January. The Liberal party decided to go into opposition, a move which was welcomed by those who regarded this party as a drag on such progressive intentions as the government might otherwise entertain (*see* ITALY).

In elections in Belgium on June 4 the Liberal party lost its gains of the previous year. Its setback was ascribed to hesitations over the dominant issue of the king's return. Elections in Denmark in September did not significantly affect the position of the centre parties (*see* ELECTIONS).

At Stuttgart in August between 200 and 300 delegates attended the largest congress yet held by the Liberal International. Salvador de Madariaga presided and others present included: Franz Blücher, the German vice chancellor, of the Freie Demokratische Partei; Lord Layton and Sir Andrew MacFadyean from Great Britain; Roger Motz, president of the Belgian Liberal party, and Paul-Ernest Devinat, a former minister in France. The congress expressed strong support for the action of the United Nations in Korea; urged the creation of a European union; proposed the abolition of passports and visas throughout the area represented in the Council of Europe; considered that the time had come to restore full sovereignty to Germany; expressed concern at the plight of displaced persons and refugees; and recommended increased publicity concerning conditions in countries under totalitarian rule. (*See* also POLITICAL PARTIES, BRITISH.)

(P. J. A. C.)

LIBERIA. Republic on the west coast of Africa, bounded N.W. by the British colony of Sierra Leone, and N. and N.E. by the French colonies of Guinea and the Ivory Coast. Area: *c.* 43,000 sq.mi. Pop. (no census ever taken, 1949 est.): 1,648,000, all Negroes. English is the official language; the tribal languages are divided into some 26 dialects which stem from Arabic, Bantu and Nilotic language roots. Liberia grants religious freedom to all denominations; nearly all Christian churches have had missions in Liberia for many years. Capital, Monrovia (pop., *c.* 12,000). President (inaugurated in Jan. 1944), William V. S. Tubman.

History. Two developments of international importance marked the course of 1950. The first was the operational opening of large-scale iron mining in the Bomi hills area by the U.S. Republic Steel corporation in co-operation with the U.S. Export-Import bank. This project involved an investment of $8 million of U.S. capital and credit, expended for opening a centre believed to contain 50 million tons of high-content iron ore. The nation's first freight-bearing railway and approximately 90 mi. of supplementary roads and highways had been completed by 1950. Also during 1950 the initial laboratory and staff dwellings for the Liberian institute, an international research centre for tropical medicine sponsored by the American Foundation for Tropical Medicine, were completed and the first research projects were planned with the co-operation of the U.S. Public Health service and the Liberian government.

Education. Schools (1950): state 81, mission 83, private 21, tribal 21. Institutions for higher education included Liberia college and the College of West Africa at Monrovia and the Booker T. Washington institute at Kakata, the latter supported jointly by the Liberian government, the U.S. government, the Firestone Plantations company and six U.S. churches and foundations.

Agriculture. Rice, cassava, palm oil, pineapples, bananas and citrus fruits were the principal crops.

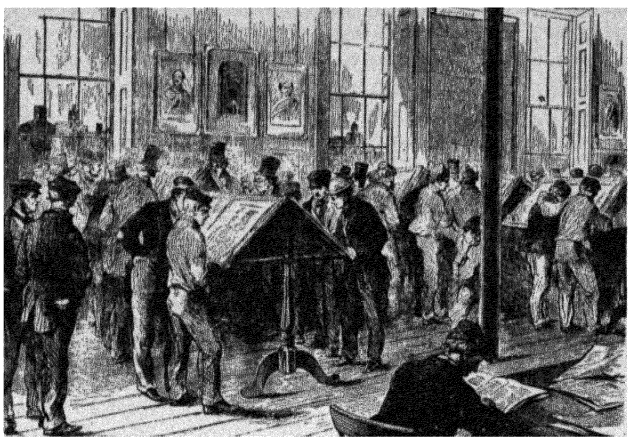
Foreign trade. (1949-50) exports $45,602,000 (preponderantly natural rubber sent to the U.S.); imports $10,913,000.

Transport. During 1950 the public road system of Liberia was extended and linked with that of French Guinea, while Monrovia was joined by highway with the previously segregated western province.

Finance. Budget (1950-51 est.): balanced at U.S. $4,998,865. The U.S. dollar is the official monetary unit of Liberia.

C. M. WI.

LIBRARIES. The close of 1950, the centenary year of the passing of the first Public Library act in Great Britain, may be considered to mark the end of the preliminary phase of reconstruction after World War II. While it is true that the needs of libraries in most countries had to be subordinated to the more urgent demands of housing and industrial recovery,



An early reading room. A scene in 1862 at the Camp-Field free library, Manchester.

two factors in particular directed attention to the need for efficient library services. Industrial recovery itself stimulated the growth of the specialized libraries and information services to which wartime requirements had afforded much encouragement, and the importance for the postwar world as a whole of the expansion of educational facilities created a demand for the establishment of public library services in countries not already possessing them and the improvement of systems already in existence. There followed an increasing awareness of the desirability for closer collaboration between libraries of all types, both within individual countries and internationally—work in which U.N.E.S.C.O. played a large and growing part. Much attention was given, largely under the auspices of U.N.E.S.C.O., to the organization of exchanges between libraries and the re-stocking of collections destroyed or damaged during World War II, to promoting the free flow of information and to the study of bibliographical and information services. Inter-library lending received a great impetus, not only from the resumption of international contacts, but also from the shortage of books and from the discovery in public libraries of a vastly increased demand for material of an advanced or "research" type. The techniques of librarianship were subjected to close scrutiny and the possibility of mechanizing certain processes explored. Prominent among devices developed after the war were microcards and the use of punched-card systems in library work, while architects and librarians studied the planning of libraries with a view to devising buildings capable of easy modification or extension. The problem of the growth of libraries led to a group of experiments in a specialized type of co-operation, including centralized cataloguing and co-operative purchasing schemes. To judge from the reports issued by libraries themselves, the trend in librarianship was towards consolidation of the work done after the war and co-ordination of the many national and international schemes, policies and programmes resulting from the studies here briefly described.

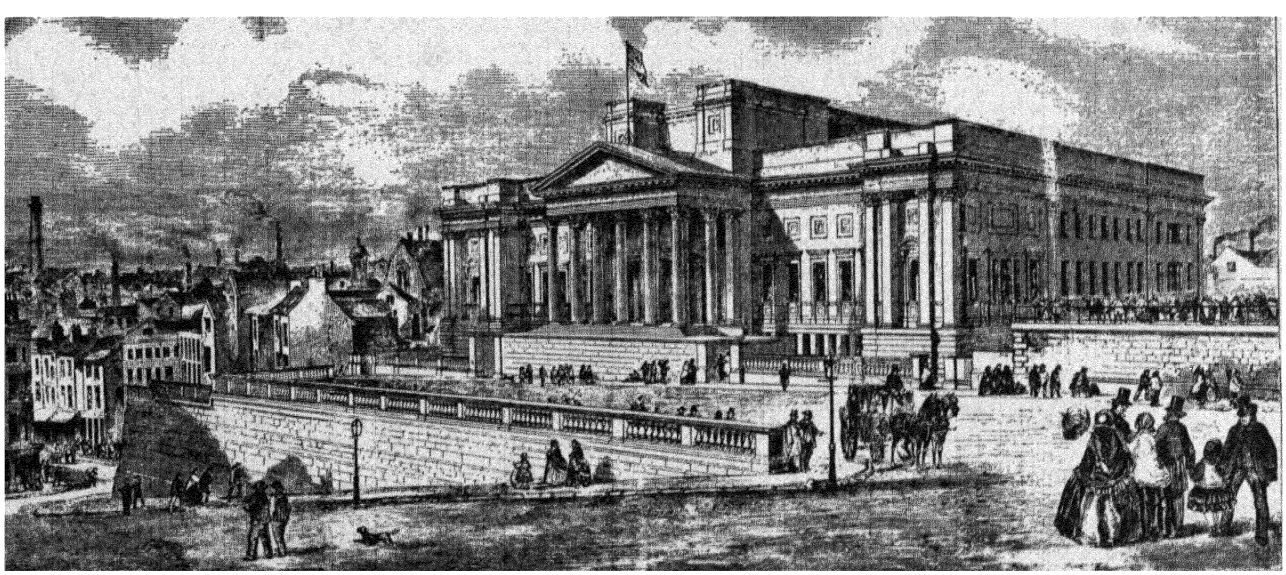
The outstanding event of 1950 was the celebration by the Library association of the centenary of the passing of the first British Public Libraries act, which received the royal assent on Aug. 14, 1850. At the centenary conference, which took place in London during Sept. 18-21, the place of the Duke of Edinburgh, president of the Library association, who was abroad on naval service, was taken by his uncle, Earl Mountbatten of Burma. Delegates attending represented the International Federation of Library associations, U.N.E.S.C.O. and over 40 Commonwealth and overseas governments and library associations. Pointing out that as fourth sea lord he bore responsibility for naval library services and might

therefore consider himself head librarian of the British navy, Lord Mountbatten spoke of the growth in size and influence of the public library movement in Great Britain and stressed particularly the importance of children's libraries in the development of the tastes and interests of coming generations. Luther Evans, librarian of Congress, and Pierre Bourgeois, director of the Swiss national library, responded to the welcome extended by Lord Mountbatten to overseas visitors. The proceedings of the conference, which included general and sectional sessions, were reported in the *Papers and Proceedings* issued towards the end of the year. Official receptions were held for the delegates by the government and by the lord mayor and corporation of the City of London. On Aug. 14, the centenary date, a wreath was laid on the grave at Niton, Isle of Wight, of Edward Edwards, who as a propagandist, a collector of evidence and the principal witness before the select committee of 1849, was largely responsible for the introduction by William Ewart of the first Public Libraries bill. Edwards became the first city librarian of Manchester in 1851, and a fitting tribute was paid to his memory at the Niton ceremony by Charles Nowell, the present holder of that office.

It had been hoped that it would be possible to hold the third International Congress of Libraries and Bibliography in Boston, Massachusetts, in October, but currency and travel difficulties proved insuperable, and instead the 16th session of the International Library committee was held in London in September before the opening of the centenary conference. Other arrangements were being made for the international congress (already postponed from 1940) to take place as early as possible. The Association of Special Libraries and Information Bureaux (Aslib) held its 25th annual conference at the University of Bristol from Sept. 22 to 25.

U.N.E.S.C.O. continued to be active in the field of international librarianship. At its general conference in Florence in June the text was agreed-upon of an international convention on the duty-free import of books and other publications. The second World Congress of Music Libraries met under its auspices at Lüneburg, July 20-22, and formed an international society. Both this congress and that held in Florence in Oct. 1949 discussed such subjects as the revision of Eitner's *Quellenlexikon*, the interchange of music between national libraries, the creation of a collection of microfilms of musical manuscripts and rare editions and the preservation and union cataloguing on a national basis of the treasures of the great European conservatories and other musical foundations. A third congress was planned to take place in either Paris or Bayreuth in 1951. A Centre de Documentation de Musique Internationale was formed in Paris to collect copies of, or information about, manuscript scores, with records wherever possible. A joint meeting of representatives of the International Federation of Library Associations, the Fédération Internationale de Documentation and the newly formed International Council of Archivists had been held at Unesco house, Paris, on Dec. 19 and 20, 1949, at which the question of overlapping in the work of these bodies had been discussed and a proposal put forward for a joint council covering all three. This proposal made little progress in 1950 but was to be further considered in 1951. The final version of a report entitled *Bibliographical Services, their Present State and Possibilities of Improvement*, prepared for U.N.E.S.C.O. by the Library of Congress, was published at the beginning of the year and was widely studied; it had been hoped that it would form a working paper for the third International Congress of Libraries and Bibliography in the autumn. The report said that there was much duplication of work, particularly in specialized fields, and at the same time a very imperfect coverage of the whole field of knowledge, and called for the co-ordination of bibliographical services (whether comprehensive or specialized) all over the world. National groups in many countries studied the report, and on the postponement of the international congress a special conference was arranged to take place at Unesco house in Paris in November to receive the views of national representatives. U.N.E.S.C.O. held a seminar on the role of libraries in adult education at Malmö, Sweden, in July and August, to stimulate the development of the educational services afforded by libraries in all member states. A list of libraries designated as depositories for U.N.E.S.C.O. and United Nations documents appeared in the *Unesco Bulletin for Libraries*, vol. 4, no. 3 (March 1950). Both U.N.E.S.C.O. and the International Federation of Library Associations sent representatives to a meeting of the documentation committee of the International Standards organization at Ascona, Switzerland, in April, when considerable progress was made in work on international bibliographical standards.

In university librarianship, the principal events were the publication at Liége of *Journées d'Etude organisées par la Bibliothèque de l'Université de Liége*, a report of the conference held in Oct. 1949 to discuss problems of documentation in



A drawing made in 1860 of the then newly opened free public library and museum in Liverpool.

university libraries, and of *The Place of the Library in a University*, in which the Harvard press reprinted papers presented at a conference on that topic at Harvard in March 1949.

The public library statistics of Great Britain and Northern Ireland showed that in the financial year 1949-50 £2,170,000, or 10½*d.* a head of the population, was spent on books and the total cost of the service was £8,653,000, or 3*s.* 6*d.* a head, nearly a million pounds more than in the preceding year. The total population served was 49,430,000, leaving 58,000 in five areas (three of them in Co. Antrim, Northern Ireland) without service. The number of books issued from lending departments was 306,100,000, a decrease of about 6 million. There were 1,631 municipal libraries (including central libraries and branches), 96 county library headquarters (of which three were combined with town libraries), 730 county branches and 21,300 county service points, served by some 70 mobile libraries of varying types and numbers of delivery vans; 586 separate local authorities controlled this system, possessing between them about 42,500,000 volumes and employing a total staff of 10,820 (excluding part-time staff, porters, binders, etc.). The expansion was most marked in the county library service.

While the standard of service provided varied considerably, the volume of inter-library lending tended to smooth out the variations to some extent. The National Central library's annual report for 1949-50 showed that books lent by or through the National Central library numbered 78,000 (as against 75,500 in 1948-49) and, through the regional systems and the Scottish and Irish central libraries, 192,000 (191,500 in 1948-49). In addition, over 21,000 books were lent in each of the two years by the National Central library and the National Library of Wales to adult classes, the totals in round figures thus being 291,000 for 1949-50 and 288,000 for 1948-49. Over 600 libraries co-operated in the work of the system, to which must be added more than 200 "outlier" libraries of a special or technical character which lent on request works not to be found elsewhere. A notable feature of the year's work was the large increase in international loans.

The work of building and reconstruction proceeded slowly. The first section of the restored library of University college, London, came into use in the autumn, and substantial progress was made with the internal reconstruction of the Central Public library at Newcastle. Many new branch libraries were opened in celebration of the centenary, most of them in converted or temporary premises, and much ingenuity was displayed in the handling of intractable buildings and materials. In Edinburgh, the reconstruction of Fisher's Close, an ancient building in the Lawnmarket which was to house the new Scottish Central library, was so far advanced that the premises were expected to be ready late in 1951, but the date for the completion of the National Library of Scotland had once again to be postponed, this time to late 1954 or early 1955—a decision which occasioned great disappointment in Scotland.

The Library association published vols. 12 and 13 of *The Year's Work in Librarianship*, the former covering the years 1939-45 and the latter 1946, and had the volumes for succeeding years in preparation. It also began to issue *Library Science Abstracts*, an important quarterly bulletin of abstracts from more than 60 British and foreign periodicals, of which the first number covered the period Jan.-March 1950. The *British National Bibliography* (*see* LIBRARIES in the *Britannica Book of the Year, 1950*) began publication in January, issuing weekly classified parts with monthly author indexes. A new independent international review *Libri*, with an editorial board representing some 20 countries, began to appear from Copenhagen. The first number of another new journal, *Le Bibliothécaire*, appeared in Belgium in January. Much attention was paid to the production of union lists of periodicals; the *Hamburger Zeitschriften-Verzeichnis*, for instance, published by the Staats- und Universitäts-Bibliothek, Hamburg, listed the periodical holdings of 200 Hamburg libraries, and the Library association published a *Union List of periodicals in London public libraries*.



A stamp issued by the city of Liverpool in 1950 to commemorate the centenary of the Public Libraries act.

Sir John Forsdyke retired from the post of director and principal librarian of the British museum and was succeeded by T. D. Kendrick, formerly keeper of the Department of British and Mediaeval Antiquities. The fifth Earl of Malmesbury (president of the Library association in 1913) died on June 12 and his fine private library at Hurn court was sold.

Commonwealth. Perhaps the most important development of the year was the establishment of a public library "pilot project" in Delhi under the joint auspices of U.N.E.S.C.O. and the Indian government, with the purpose of demonstrating the value of an effective public library service both in adult education and in the campaign against illiteracy. If the scheme were successful, it might prove a model for the extension of public library services not only to other cities in India but also to Asia as a whole. Special attention was to be devoted to the needs of newly literate adults and to services for children. The building was to be in Old Delhi adjoining the headquarters of the Adult Education board, and reference, information and lending services were to be provided. U.N.E.S.C.O. would contribute a fellowship for study outside India to the Indian librarian selected as director, and the library would be opened to the public with an initial stock of some 10,000 volumes and other material early in 1951. The scheme for the establishment of a National Library of India was postponed for financial reasons. The Karachi Library association arranged a convention in July with a view to establishing a comprehensive library service throughout Pakistan.

The work of the newly established Canadian Bibliographical centre at Ottawa expanded greatly during the year and funds were set aside for the construction and equipment of a building. In its temporary quarters in the offices of the public archives a Library of Congress depository catalogue (which the Library of Congress undertook to keep up to date) was installed and the microfilming was begun of the catalogues of government and other libraries in Ottawa, Toronto and Montreal. The Canadian National Library Advisory committee decided in February that the centre should develop an organization for producing a Canadian national bibliography and prepare itself for active co-operation in all forms of international bibliographical activity. All these activities could be regarded as essential preliminaries to the establishment of a National Library of Canada, which was one of the primary objects of the centre. The Canadian Library association held a conference at Montreal in June on the theme " Inter-relations: the Library and the Community," at which international relations received close attention. At the end of 1949 Edgar Osborne, county librarian of Derbyshire, England, presented to the Toronto Public library his outstanding collection of children's books, containing about 1,800 18th- and 19th-century items—mostly in their original bindings and some unique—with a few examples from the 16th and 17th centuries.

The Australian Institute of Librarians, founded in 1937, adopted at the end of 1949 a new constitution similar to that of the library associations in Great Britain, the U.S. and elsewhere and was renamed the Library Association of Australia. Plans for the library of the new Australian

National university at Canberra made progress, many volumes were purchased and held in readiness at Melbourne, and the librarian, A. McDonald, undertook an extensive study tour of Great Britain and the U.S. The new extension to the university library at Melbourne was nearly completed, but a fresh building on a new and larger site was urgently needed. In South Africa, the possibility was being studied of organizing a scheme of co-operative acquisition between the South African Public library and the libraries of Capetown and Stellenbosch universities.

Europe. The Bibliothèque Nationale, Paris, exhibited some of the magnificent illuminated manuscripts which formed part of the Rothschild library, collected by the father of Baron Henri de Rothschild and presented on the latter's death. A notable work of reconstruction was begun at Valognes, Normandy, where the library of 20,000 volumes and 250 manuscripts and *incunabula*, many unique, had been seriously damaged by a bomb in 1944. For six years nothing had been done to repair the building or to save the books, which remained in heaps in the damaged rooms; but in May 1950 U.N.E.S.C.O. called on library associations and classical departments of universities for voluntary help in the work of restoration, and in response a number of Danish students, assisted by two Danish binders and by the French Direction des Bibliothèques, began work. Later, a member of the staff of the Royal Library at Copenhagen arrived to report on the re-cataloguing of the *incunabula* and rare books, and it was hoped that in the spring of 1951 a further team of helpers from Denmark would be able to carry out this task. During the work many hitherto unknown treasures were discovered.

The important collections of *Hebraica* in the Royal Library, Copenhagen, were considerably enlarged by the acquisition of the library of Lazarus Goldschmidt (*see* OBITUARIES), containing 2,500 volumes—all of importance and some of great rarity—among which was a valuable series of Ethiopic printed books. The sixth conference of Nordic Library associations (those of Denmark, Finland, Norway and Sweden) was held in Uppsala in June.

The Verein Deutscher Bibliothekare celebrated its 50th-anniversary at a conference in Marburg from May 30 to June 2. A survey presented at this conference by Dr. von Both showed that the libraries of Hesse (excluding those in Marburg itself) had lost 2 million out of their total stocks of 3·5 million volumes, the libraries at Darmstadt, Frankfurt, Giessen and Kassel, among others, being almost completely destroyed. In Marburg itself the re-establishment under the title of Westdeutsche Bibliothek of such of the collections of the old Preussische Staatsbibliothek in Berlin as were recovered in the American zone after World War II was completed after four years of arduous work. About 1,600,000 volumes, some 250,000 maps, 23,000 manuscripts, and the Darmstädter collection of 200,000 autographs were arranged and re-catalogued in the building of Marburg university library and other buildings in the neighbourhood (the university having moved its library to the Staatsarchiv building). Münster university library, which lost the greater part of its buildings, some 400,000 volumes and most of its catalogue, had restored about half of its catalogue and constructed a seven-floor book-stack by the beginning of 1950, and had adopted an interesting method of rapid or summary cataloguing in order to keep current accessions up to date. The Stadtbibliothek at Munich, completely destroyed in 1944, was re-opened in a former barracks in May. The Bavarian *Landtag* set aside Dm. 1,030,000 for the rebuilding of libraries and Dm. 629,000 for the restoration of public archives for the year 1950. In Hamburg, work was begun on a union catalogue of Chinese literature in German libraries. In Vienna, Josef Stummvoll succeeded Josef Bick as Generaldirektor of the Austrian National library. The reading room of Vienna university library, destroyed by a bomb, was re-opened to students.

A bibliographical information service was established in Florence (where U.N.E.S.C.O. held its fifth general conference in May and June), for the purpose of organizing and co-ordinating bibliographical, historical and literary research work in Florentine libraries. During the U.N.E.S.C.O. conference a branch of the Florence Municipal Public library, with a special children's section, was opened in the Palazzo Gerini in the district of Santa Croce, the first of a series of branch libraries to be established under a postwar programme of library development. The reconstruction of the National library at Turin, which was bombed and lost 150,000 volumes in World War II, was well advanced by the end of the year. In connection with the observance of the Holy Year the Vatican library arranged an important exhibition of musical manuscripts—European, Byzantine and Oriental—of great liturgical interest.

The Bibliografiski Institut of Yugoslavia began to issue a quarterly national bibliography from Belgrade in January. The titles are classified by the Universal Decimal classification.

U.S.S.R. Information from the U.S.S.R. was difficult to obtain, but details on technical libraries taken from Vasilchenko's *Libraries in the Soviet Union* (Moscow, 1947) were quoted by Elsa von Schreiber in the *Zentralblatt für Bibliothekswesen*, vol. 64, Heft 3/4, 1950. The Polytechnic library in Moscow had 944,000 volumes in 1941. Apart from this library, which was under independent administration, there were four classes of technical library in the Soviet Union: those belonging to the Ministry of Higher Education; those under other ministries; the libraries of the Academy of Sciences of the U.S.S.R.; and those attached to factories, institutes and cultural centres. The first group contained 31 university libraries, of which the biggest were those of Moscow, Leningrad, Kazan and Saratov, and 273 technical college libraries and also the National Scientific Technical library in Moscow, with 1,200,000 volumes, which acted as a bibliographical and information centre for all technical libraries and had agencies in some of the large industrial towns. The libraries of the second group formed a complicated system of highly specialized collections serving the activities of the ministries to which they were attached—the Ministry of Transport, for instance, had a central library, railway libraries at the important railway towns, technical libraries at railway works and libraries in schools of instruction and research institutions. The Academy of Sciences had in 1945 a total of 10,900,000 volumes in all its libraries, of which 2,900,000 volumes were in 71 special libraries in Moscow, Leningrad and other cities. There were in 1947 some 3,800 libraries in the fourth group, containing over 22 million volumes, together with a system of travelling libraries disposing in 1940 of 35,000 volumes (no later figures apparently being available), relying largely on voluntary staffs and serving small scattered undertakings. The largest industrial libraries at that date were those of the Stalin metallurgical works at Magnitogorsk (120,000 volumes) and the Molotov motor works at Gorki (105,000 volumes). In 1949 there were two library schools (Moscow and Leningrad) training 250 students for work in learned libraries, and 25 schools training 1,750 students for work in other libraries and 635 students in "advanced work," *e.g.* in technical libraries. The most important of these were at Moscow, Rostov, Kirov and Vladimir. Soviet book production for 1950 was estimated at 11,900 new publications apart from periodicals.

Other Countries. The Turkish Librarians' association was established at Ankara and affiliated to the International Federation of Library Associations. The Libraries section of the Israeli Ministry of Education, beginning in December, 1949, set up 40 libraries in towns and 25 in newly settled

colonies, as well as a small travelling library system. Reports from Seoul indicated that the Korean capital, when re-taken in Oct. 1950 was found to be completely bereft of the contents of the Imperial university library and the former Japanese government library, and that nothing was known of the whereabouts of these collections or of the contents of the Seoul museums. (F. L. K.)

United States. *Books and Publications.* In the autumn of 1950 a joint committee of American Library association members and of publishers was established to explore common problems such as postage rates, freedom of the press, exhibits and promotion. A survey of " paper-bounds " in pocket size disclosed surprisingly little interest in their general use by libraries. The Library of Congress instituted its *Cumulative List of Works Represented . . . by [L. C.] Cards*, which would be a useful subject bibliography.

Special Libraries and Collections. The problem (principally financial) of maintaining organizational reference libraries was shown in the transfers of the Carnegie Endowment for International Peace library to George Washington university (both in Washington, D.C.), the Woodrow Wilson library to the United Nations and the Russell Sage Foundation library to the College of the City of New York (all in New York city). The University of California at Los Angeles opened an English literature library, with a nucleus of Frederic T. Blanchard's books (strong in Henry Fielding) and with an endowment for the purchase of 18th-century works. Gifts and acquisitions included that of the Edward S. Harkness collection of rare books by the New York Public library; H. L. Mencken's library by the Enoch Pratt Free library, Baltimore, Maryland; the Mark Twain papers by the University of California, Berkeley, which would seek funds for a building and an endowed chair; and the A. W. Stern collection of Lincolniana by the Library of Congress.

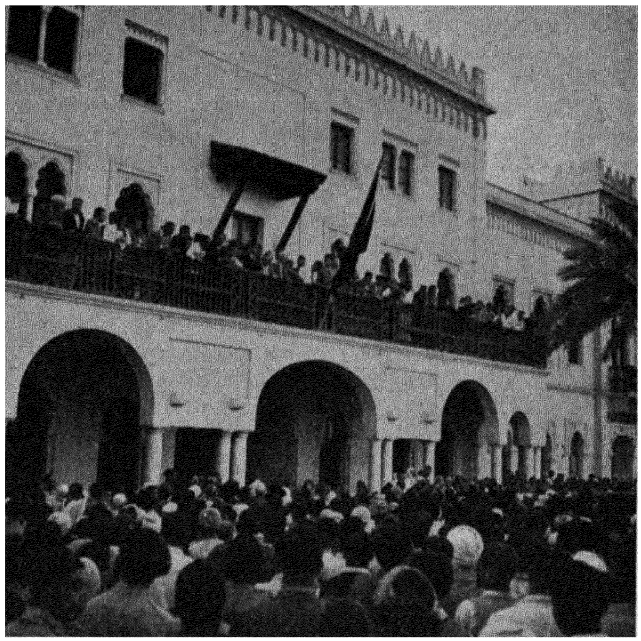
Public Libraries. Public libraries continued to grow. According to the U.S. office of education, libraries in cities of 100,000 or more population had increased, between 1945 and 1949, from 42,099,905 volumes to 46,304,469 in book stock (it must be remembered that public libraries are continually discarding worn-out and outmoded volumes); the number of borrowers had increased 14·34% and circulation was up 8·61%.

School and Children's Work. The shortage of children's librarians continued. The Children's Library association, affiliated with the American Library association, observed its 50th anniversary. The American Association of School Librarians assumed divisional status in the A.L.A. Several state library associations provided " sections " for high school library assistants as a means of recruiting.

Other Fields. Two libraries—the City Library association, Springfield, Massachusetts, and the Brooklyn, New York, public library—began circulating framed pictures, a practice not undertaken by more than half a dozen public libraries. The Louisville, Kentucky, public library was the first to have its own radio station. Microcards were gaining in popularity. The Library of Congress began lending microfilms.

Equipment. Modernization of equipment went on apace, with all kinds of office aids being investigated and adapted. The public libraries of Racine and Milwaukee, Wisconsin, had teletype communication as an aid to inter-library borrowing. The New York public library's circulation department installed completely mechanized book-processing machinery, including a conveyor. The Charlotte, North Carolina, public library was doing its book-charging with a dictating machine. (K. Bn.)

LIBYA. Former Italian colony of north Africa, situated on the Mediterranean between Tunisia (west) and Egypt (east). Total area: 679,183 sq.mi. Under temporary British



A crowd in Bengasi listening to Adriaan Pelt, United Nations commissioner for Libya, on Libyan Independence day, 1950.

administration, introduced in 1943, Libya was divided int Tripolitania (96,471 sq.mi.) and Cyrenaica (330,259 sq.mi.) the western part of Libyan Sahara, or the Fezzan, was place under French military administration. Total pop.: (1938 est 888,400 including 89,100 Italians; (1949 est.) Tripolitani 796,901, including 46,399 Italians; Cyrenaica 327,46 including 1,604 Greeks, Maltese and others; the Fezzan abou 50,000. The population is Berber, intermixed with Ara strains, especially in Cyrenaica. Language: Arabic. Religior mostly Moslem. Chief towns (pop., 1949 est.): Tripo (144,616, including 28,485 Italians); Bengasi (59,087). Th British government recognized on June 1, 1949, Em Mohammed Idris el Senussi as the ruler of Cyrenaica. O Nov. 21, 1949, the general assembly of the U.N. decided tha Libya should be independent by Jan. 1, 1952, and on Dec. 1(1949, elected Adriaan Pelt (Netherlands) as high commissione of the United Nations for Libya in charge of the interi administration. British Administrators: Tripolitania, T. F Blackley; Cyrenaica, D. A. V. de Candole.

History. No radical change occurred in the government (the three component territories of Tripolitania, Cyrenaica an the Fezzan, although each moved towards greater loc autonomy. The first two remained under British administra tion and the last under French administration. The Unite Nations commissioner, with his advisory council of seve representatives of member states, together with represent tives of each of the territories and of minorities, started wor in Libya early in 1950 on his task of advising the peop in the formulation of a constitution and determination of th form of government. Cyrenaica had already been granted wide measure of autonomy in internal matters and a loc constitution under the leadership of the Emir Mohamme Idris el Senussi. Elections were held for an Assembly (Representatives. This was inaugurated on June 12. I Tripolitania, a scheme to establish an autonomous gover ment for internal affairs was dropped at the request of th United Nations high commissioner, who considered that th development of separate regional governments might prejudi the ultimate form of government for the whole country. It wa not practicable to hold elections in Tripolitania to any for of legislature because local political leaders averred that th presence of the British administration would operate again free election. In the Fezzan elections to an Assembly (

Representatives were held in February. The Assembly unanimously elected Ahmed Bey Seif el Nasr as chief of the territory. The powers granted by the French administration to the chief were broadly confined to administrative matters, the French resident retaining the executive power.

The welding of these three territories, jealous of their autonomy, into a single state was made more difficult by the difference in the size of their population. The first step taken by the high commissioner, after a long tussle with the members of his council, who represented divergent political conceptions, was to form a national committee of 21 members, 7 of whom were nominated by each territory. This committee prepared plans to convoke a national assembly whose task would be to determine the form of government and to formulate a Libyan constitution. The committee decided that the national assembly should be composed of an equal number of members to be nominated from each of the three territories. This decision, although within the competence of the committee, was attacked by several delegations in the general assembly of the United Nations in Nov. 1950, when progress in Libya came under review. The evident intention of the Libyan people to set up a federal state instead of a purely unitary one was distasteful to the Arab states, despite the fact that the United Nations had left the choice unreservedly to the Libyans themselves. The general assembly eventually passed a resolution calling for greater speed in setting up a Libyan state and for the establishment of a provisional government by April 1, 1952, to which the powers of the present administrations would be progressively transferred.

The Libyan National Assembly met in Tripoli on Dec. 2 and decided that the state should be a federation and that its government should be a " democratic, representative, constitutional monarchy under the crown of the emir of Cyrenaica." Having taken these decisions and made preliminary arrangements for the formulation of a constitution the Assembly adjourned and moved *en bloc* to Bengasi to offer the emir the crown of king of Libya. The emir decided to delay the proclamation until he possessed the constitutional powers necessary to exercise sovereignty. (F. E. S.)



The Emir Idris el Senussi in his palace at Bengasi. On Dec. 3, 1950, the Constituent Assembly chose him as King of Libya.

Economy. *Tripolitania:* Budget (1948-49, actual) revenue £4,337,416; expenditure £4,918,950. Foreign trade (£'000, 1948; 1949 in brackets): import 1,949·4 (3,458·8); export 1,532·9 (1,332·8). Roads (1949) 2,500 mi.; railways (1949) 122 mi.; ships entered at Tripoli (1949) 1,058,531 N.R.T.

Cyrenaica: Budget (1948-49, actual): revenue £2,089,392; expenditure £2,826,703. Foreign trade (£'000, 1948; 1949 in brackets): import 1,718·8 (1,894·4), export 2,146·2 (1,565·4). Roads (1949, incl. tracks) 6,600 mi.; railways (1949) 101 mi.; ships entered at Bengasi and Tobruk (1949) 857,157 N.R.T.

LIE, TRYGVE HALVDAN, Norwegian diplomat and United Nations official (b. Oslo, July 16, 1896), was the son of a carpenter. He earned his education by working as an office boy in the headquarters of the Norwegian Labour party and became its legal adviser in 1922 and from 1926-40 a member of its national council. He was appointed minister of justice in the Labour government in 1935 and minister of commerce in 1939. After the German invasion he accompanied the exile government to London and became minister of foreign affairs on Feb. 21, 1941. He travelled on missions to Washington in 1943 and to Moscow in 1945. At the United Nations conference at San Francisco in 1945 he was chairman of the commission that drafted the charter for the Security council. Re-appointed minister of foreign affairs of Norway in Oct. 1945, he went to London for the first meeting of the U.N. general assembly, where he was elected secretary-general on Feb. 1, 1946. In the spring of 1950, in a brave attempt to bring east and west together, he visited London, Paris, Moscow and Washington. In Moscow he saw Joseph Stalin (May 15) and stated that he had no reason to be dissatisfied with this conversation. When he returned to New York he was openly accused by some newspapers as an " agent of the Kremlin," but soon after the Communist aggression in Korea he was described by *Izvestia* (Moscow) as the " American imperialists' dummy." On Oct. 12 Yakov Malik, the Soviet representative, used the veto power to prevent the re-election of Trygve Lie as secretary-general of the U.N. On Nov. 1, although Andrey Vyshinsky called Lie a " stooge of the U.S.," the general assembly, by 46 votes to 5, with 8 abstentions, extended Lie's term of office for another 3 years.

LIECHTENSTEIN. A small independent principality between Switzerland and Austria. Area: 61·4 sq.mi. Pop.: (Dec. 1949 est.) 13,200, incl. 2,100 foreign residents. Language: German. Religion: Roman Catholic. An elected Landtag of 15 members appoints the government. Capital: Vaduz (pop., 2,400). Ruler, Prince Franz-Joseph II; prime minister, Alexander Frick.

History. The principality, which was not a member of the United Nations, expressed the wish to become a party to the statute of the International Court of Justice. In Dec. 1949 therefore the general assembly adopted by 40 votes to 2 with 2 abstentions a resolution stating that Liechtenstein would become a party to the statute on the date of the deposit with the secretary general of the U.N. of an instrument containing: (a) acceptance of the provision of the statute of the I.C.J.; (b) acceptance of all the obligations of a member of the U.N. under article 94 of the charter; (c) an undertaking to contribute to the expenses of the I.C.J.

Prince Franz-Joseph II offered for sale at a New York gallery the only known copy of a map of " America " printed in 1507. It was announced on May 26 that there were no bids as the prince stipulated that the minimum must exceed $50,000.

Education. Schools (Nov. 1949): primary 13, pupils 1,599, teachers 47; secondary 2, pupils 145, teachers 8.

Finance and Economy. Budget: (1949 est.) revenue Fr. 4,266,200, expenditure Fr. 4,575,749; (1950 est.) revenue Fr. 4,451,200 expenditure Fr. 4,775,949. Included since 1924 in the Swiss customs and monetary union, Liechtenstein uses Swiss currency.

LIGHT ENGINEERING. The dominant impression in light engineering during 1950 was of an increasing application of electronic methods in direct instrumentation and in application to other branches of engineering, as a means of closer and more accurate control, particularly in machining operations, and the consistent and successful efforts made to increase the range of fresh materials of construction at the disposal of the designer. The influence of experience in the application of higher temperatures in internal combustion engineering, the search for stronger alloys, combined metal and ceramic compositions and new techniques of manufacture for some of the combinations proposed were also specially evident. Activities in Britain in 1950 were largely in a state of balance between a pressure for increased production and a continued development and introduction into industry of new products or new versions of established designs. Among the significant movements noted were the growing capacity of East German industry as shown at the Leipzig Technical fair, the Anglo-American productivity team reports on engineering subjects and the success of such events as the Mechanical Handling exhibition where British industry showed its remarkable adaptability in the production of machines intended to economize in, or replace manual labour.

In the field of radar, important achievements were the introduction of several long-range navigational aids of remarkable efficiency and the extension of television transmission in the opening (Dec. 1949) of the Sutton Coldfield station, the most powerful in the world, and its relay link from London. Other noteworthy developments were the great expansion in the manufacture in quantity of industrial oil engines—the range of powers available was extended to cover many of the sizes previously restricted to petrol engines—and the successful efforts made by British manufacturers to make and sell electric motors and similar equipment to foreign specifications in highly competitive markets.

Throughout the year reports were continually coming to hand of factory extensions carried out to meet increased demands for export, the reorganization and re-equipment of foundries, machine shops and engineering works and the adaption for use in established production plants of processes such as induction heating for the treatment of steel, methods of electronic control and timing for operations hitherto carried out by mechanical or electrical means, the fitting of optical aids to machine tools for work of extreme accuracy and the development of new metallic alloys, plastics and ceramic materials for electrical and internal combustion engineering.

Aircraft. Undoubtedly the most notable item of news in any branch of engineering during the year was in the field of aircraft engineering—the announcement of the completion of the most powerful turbo-jet engine on which performance data had been published. The performance data quoted gave an output of 7,200 lb. static thrust which was 1,000 lb. higher than any other figure quoted during the year. The progress made in aircraft engineering generally during the year was demonstrated at the exhibition organized by the Society of British Aircraft Constructors where more new types were on view than ever before; of the total of 58 on display 30 were making their first appearance and gas turbines provided the power for 28 machines. Towards the close of the year the official cuts made by the British government in orders for new aircraft were largely annulled by the adoption of the rearmament programme.

Transport. In the transport field a notable trend observed was the extent to which the oil engine was adopted as the motive power for shunting locomotives. Several designs of up to 300 h.p. were produced, generally with mechanical transmission incorporating fluid couplings but at least one instance was noted in which electrical transmission was adopted and the indications were that scope was found for both systems because of the wide range of duties in which stock of this kind was employed. Road transport was markedly influenced by the demand for greater capacity in vehicles of all kinds, and in passenger transport several well-known manufacturers announced the introduction of under-floor engines of high power. A general tendency in body manufacture for passenger vehicles was the widespread adoption of composite construction in which extruded aluminium alloy sections were employed for all the lighter framing.

Oil Engines. Industrial oil engines, apart from those applied mainly in transport, exhibited during the year one of the most rapid developments in the postwar period. Manufacture in quantity of engines in the range of 20 h.p. to 100 h.p. expanded steadily and one British company claimed that its own output of a particular series actually exceeded that of the whole of the United States for the same type of engine. This general expansion was accompanied by a similar growth in the variety and number of designs of machines for civil engineering and contracting work. New models of such plant as mobile cranes, dumpers, light excavators, bulldozers and lighter versions of the same machine, all powered by engines of this class, in which four-stroke designs largely predominated, were introduced. High-powered equipment intended for such work as oilfield drilling and similar heavier duties was also represented.

Farm Machinery. Extended progress in the mechanization of farming was also assisted by the growth in the production of oil engines of all types. New tractors for agriculture were mostly in the higher power range of up to 40 h.p. and 50 h.p., but a comparatively large number of small engines including the single- and two-cylinder types of less than 10 h.p. were introduced by several firms and proved adaptable for a multiplicity of services in auxiliary machinery. The practice of designing farming implements specifically for operation with tractors gained ground substantially.

Mechanical Handling. Parallel with the development of light tractors and agricultural machinery was the great interest displayed in mechanical handling equipment of all kinds and here, while progress in conveyors, hoists, lifts and fixed plant for internal transport proceeded along lines already established, attention during the year was focussed principally on the still relatively new fork-lift truck and the associated principle of palletization (the carrying of goods stacked on a platform). In most machines of this type the general trend of design was towards storage battery propulsion and the economy in labour made possible by their adoption was one of the principal features of the exhibition held in Britain early in the year. The concentration on the wider employment of this and related equipment in Britain, where progress had not equalled that made in the U.S. was one of the features emphasized by the reports of the team which visited the U.S. to observe and compare American methods.

Machine Tools. Most of the developments in the year were a continuation of those already initiated in previous years. In 1950 it was noticeable that while the pursuit of higher machining speeds, advanced production technique to take advantage of improved carbide tools, electronic control of spindle speeds on the lathes, extended application of the practice of forming grinding wheels by crushing and the introduction of new models of multi-spindle automatic lathes continued, marked emphasis on transfer operations and the supplying of the work to the machine began to be noticeable. A number of instances of the construction of equipment designed to secure production economies by the incorporation of automatic transfer of work pieces was reported. In the motor industry in particular, systems of this kind were developed in conjunction with standard multi-spindle drilling machines, special jigs and power driven conveyors and a large proportion of the new plant produced was notable for

carefully designed inter locking controls, systems of pilot lights to indicate the completion of an operation and methods of indexing the progress of the work to prevent accumulation of stacks at intermediate stations.

A steady movement towards the adoption of machines built for special requirements in the manufacture of particular products was observed, particularly in the cycle and motor car industries in Britain. On the continent of Europe the first postwar Leipzig Technical fair gave an indication of the extent to which German production had recovered. Among the many exhibits in the machine tool field, which was well represented, were planing and grinding machines, mechanically and hydraulically operated slotting machines, milling and gear cutting machines and equipment for honing the cylinders of heavy oil engines. An interesting automatic turret lathe had control mechanism enabling tool stops to be pre-set for each work piece in accordance with corresponding spindle speeds and feeds. At the Swiss Industries fair early in the year new developments in forging were foreshadowed by the display of an electrically controlled semi-automatic machine in which the forming of a piece was carried out by innumerable high speed hammering operations. Great savings in the consumption of power and in setting-up time together with a higher degree of accuracy over older designs were claimed. On the same occasion new hydraulic copying lathes, in one instance with a vertical bed for the saddle and tailstock, gear generating machinery and compressed-air veneer- and plywood-forming presses of unusually high performance indicated the advanced ideas gaining ground in this field.

Welding and Flame Cutting. The adoption of welding processes as a means of fabrication and frequently of replacement of castings or solid forgings made substantial progress during the year, in particular in the improvements effected in resistance welding machines and modifications in the metallic arc process. In resistance and metallic arc welding, methods of submerged arc welding made advances in the development towards hand operation and several machines in which manual control of the actual deposition of metal was achieved extended the scope of the process in the welding of seams inaccessible to the fully automatic equipment. Modifications of the equipment employed for argon-arc welding in which a tungsten electrode is used in a stream of inert argon gas showed that in the welding of substantial thicknesses of stainless steel and light alloys of aluminium this process had become a serious competitor with other means of fusion welding.

As an ancillary to the welding process the flame cutting of steel increased steadily in importance. In addition to the introduction of flux compositions and new techniques enabling more difficult materials to be handled almost as readily and economically as ordinary steel several automatic flame cutting machines of novel design were perfected and, in a typical model, operation was effected directly from a working drawing with electronic control of the cutting head in conjunction with a beam of light and a photo-cell unit.

New Materials. In many respects the emphasis on progress in all branches of engineering in the postwar period was placed by the fresh scope given to the designer in the development of new materials mainly in the metallurgical world. During the year the official announcement was made of the properties of the latest high creep strength nickel alloy which had been produced for the manufacture of turbine blades for jet engines and while, as in most steps forward in this field, publicity probably came some time after further progress had been made, the release of the information was in itself sufficient indication that fresh advances were in hand. In connection with research into new alloys several organizations reported that work on the commercialization of methods of reducing and casting alloys of titanium had gone sufficiently far to foreshadow the eventual introduction of titanium as the basis of an entirely new series of alloys with properties capable in some respects of surpassing both ferrous alloys and the strong light alloys based on aluminium.

One significant step was the obvious progress made in the production of the new varieties of grey cast iron based on the treatment of the molten metal with magnesium to produce a spheroidal structure of the graphite instead of the normal and weaker flake condition. In both the U.S. and Europe castings weighing ten tons and more were produced in parts intended for service where previously it was necessary to use steel, and in Britain also the growth of knowledge of its value promised to give iron casting a new outlet. (W. As.)

LINEN AND FLAX. Exports of linen fabrics from Northern Ireland during 1950 were a record. In the third quarter of the year, they were double the 1949 shipments for the same period. The principal customer was again the United States, with the British Commonwealth countries next. Increased demand by the northern European countries, notably Sweden and Denmark, partially compensated for a sharp decline in South American demand, especially by Argentina.

It was estimated that the U.S. took 42·6% of the world's production of linen fabrics during 1950, the British Commonwealth countries 24·9%, European countries 13·17%, Latin American countries 12·4% and other countries 6·4%.

Imports of linen fabric into the United States during 1950 totalled 11·7 million lb. as compared with 5·9 million lb. in 1949. The United Kingdom, Belgium and Poland were the principal suppliers.

World consumption during 1950 ran ahead of the raw material supply. Flax growing and spinning had been curtailed sharply in recent years because of labour difficulties as well as diminishing demand. The sharp spurt in consumption found the industry in Northern Ireland alarmed over the prospects of the flax supply for 1951. Industry representatives urged that 100,000 ac. in the British Isles should be planted to flax and that help should be extended to farmers in the form of suitable seed and sufficient fertilizer.

In France, mill consumption rose by 10% in the first half of 1950 and in September the output of linen goods was almost 50% greater than the monthly average for 1949. Yarn output for 1951 was estimated at 30,000 metric tons which would require 42,000 tons of fibre and tow. Of this, at least 16,000 tons of processed flax would have to be imported. Belgium was expected to supply most of it.

At the beginning of the year, Austrian farmers were being encouraged by their government to expand the flax crop by 25%. By December, however, it was reported that the plan had failed. The expected 1950 yield was 630 to 700 metric tons of long fibre and 315 to 350 tons of tow. Imports, however, showed an upward trend. In the first six months, 445 tons of flax were imported, as compared with 742 tons in all of 1949, and 546 tons of tow and waste against 556 tons for the entire preceding year. Austrian mills' 1950 requirements were about 1,700 tons of both fibre and tow.

Among other countries mentioned in 1950 as flax producers were Poland, Czechoslovakia, British East Africa, Denmark, Cyprus and Australia. The Danish linen industry was hampered by the poorest flax crop in a decade. Not more than 500 metric tons of the 1,000 tons needed was expected. Austrian flax deliveries in 1950 dropped about 65% from 1947. (I. L. BL.)

LITERARY PRIZES. *Nobel Prizes for Literature.* The 1950 prize was awarded to Bertrand Russell (*q.v.*) for

" his versatile and important writings in which he has shown himself an apostle of humanity and freedom of thought." At the same time the 1949 award, which had been withheld because none of the candidates then considered had received an absolute majority of votes from the adjudicating committee, was awarded to William Faulkner (*q.v.*) for " his vigorous and independent artistic contributions to American fiction." The value of each award was £11,740.

Great Britain. Among the awards during the year were: the JAMES TAIT BLACK memorial prizes (about £250 each) to Emma Smith for *The Far Cry* (fiction) and to John Connell for *W. E. Henley* (biography); from the WILLIAM HEINEMANN foundation (up to £200) to John Guest for *Broken Images* and to Peter Quennell for *John Ruskin*; the CARNEGIE medal (for an outstanding book for boys or girls) to Agnes Allen for *The Story of Your Home*; the ROSE MARY CRAWSHAY prize (£100, for a critical or historical work on English literature by a woman) to Helen Darbishire for her Clark lectures and in recognition of her collaboration in an edition of Wordsworth's poetical works; the JOHN LLEWELLYN RHYS memorial prize (£50) to Kenneth Allsop for *Adventure Lit Their Star*; the SOMERSET MAUGHAM award (about £250 for a British writer under 30 to be used for foreign travel) to Nigel Kneale on the strength of his book of short stories *Tomato Cain and Other Stories*; the DENYSE CLAIROUIN memorial prize to Antonia White for her translation of *Une Vie* by Maupassant; the SUNDAY TIMES book prize, (£1,000) to T. S. Eliot for *The Cocktail Party*; the WILLIAM FOYLE poetry prize (£250) to Christopher Fry (*q.v.*) for *Venus Observed.*

A new literary prize founded in 1950 was the FREDERICK NIVEN award. It was instituted in memory of the Scottish writer by his widow. The sum of £100 was offered for the most outstanding contribution to literature by a Scotsman or Scotswoman; the first award went to Nancy Brysson Morrison for her novel *The Winnowing Years.* Nearly 60 ATLANTIC awards were given to young or new writers by the committee responsible for administering the funds placed at their disposal by the Rockefeller foundation. The object was the assistance of British writers whose careers had been interrupted by World War II, by providing a year's respite in which they could develop their powers free from financial worry. The committee decided that a sum of between £250 and £300 (with occasional variations to suit individual circumstances) would enable a successful candidate to live modestly for a year, and thus enable the committee to pursue its policy of granting, instead of liberal grants to a few promising candidates, a more moderate one to a larger number. In 1949 the chairman of the committee, Professor Allardyce Nicoll, stated that the committee felt it their duty to declare publicly their " belief in the need and usefulness of such help as the Rockefeller Foundation has provided," and urged then, and again on the completion of their work in 1950, that the work should be continued by British funds. " The war killed men, and with them, no doubt, many good books," the committee wrote in their final report. " That loss is irretrievable; but help can be given in time of peace to those young writers who are threatened by inimical forces which, if less immediately apparent and less tangible, are as likely as war itself to stultify and ultimately to destroy their talents." (E. SE.)

France. More than 100 literary prizes were awarded in France in 1950. Among them were: ACADÉMIE GONCOURT to Paul Colin for *Les Jeux sauvages*; THÉOPHRASTE RENAUDOT to Pierre Molaine for *Les Orgues de l'enfer*; FEMINA to Serge Groussard for *Une Femme sans passé;* INTERALLIÉ to Georges Auclair for *Un Amour allemand;* SAINTE BEUVE: (summer) novel, to François Gorrec for *La Septième Lune*, essay, to Marcel Arland for *Marivaux*; (winter) novel, to Jean-Charles Pichon for *Il faut que je tue M. Rumann*; essay, to Georges Poulet for *Etudes sur le temps humain*; DENYSE CLAIROUIN to Denise van Moppès for her translation of Alan Paton's *Cry the Beloved Country*; ACADÉMIE FRANÇAISE (literary) to Marc Chadourne, (essay) to Joseph Jolinon for *Les Provinciaux*; AMBASSADORS' to the late Simone Weil for *Attente de Dieu*; REVIEW to *Cahiers du sud*, in its 37th year; SOCIÉTÉ DES GENS DE LETTRES to Francis de Miomandre and Luc Estaing; and SOCIÉTÉ DES AUTEURS ET COMPOSITEURS DRAMATIQUES to Denys Amiel and Jacques Bernard; CITY OF PARIS (essay) to Jean Paulhan, for the sum of his works. (M. JOL.)

United States. ACADEMY OF AMERICAN POETS FELLOWSHIP, $5,000 to E. E. Cummings. AMERICAN ACADEMY OF ARTS AND LETTERS AWARD OF MERIT MEDAL, with prize of $1,000, to St. John Perse. THE ACADEMY HOWELLS MEDAL for the most distinguished work of American fiction, to William Faulkner (*q.v.*) H. L. Mencken won the institute gold medal for essays and criticism. AMERICAN HISTORICAL ASSOCIATION grant of $1,500 to Glyndon C. Van Deusen to complete a biography of Horace Greeley. ANISFIELD-WOLF AWARDS, $1,000 each for the year's best books on race relations, to S. Andhil Fineberg for *Punishment Without Crime* and to Shirley Graham for *Your Most Humble Servant.* BANCROFT PRIZES, for distinguished writings on American history, $2,000 each to Herbert E. Bolton for *Coronado* and to Lawrence H. Gipson for *The Victorious Years, 1758-1760.* BOLLINGEN PRIZE IN POETRY, $1,000 to Wallace Stevens for his contribution to American poetry. O. HENRY MEMORIAL AWARD PRIZE STORIES, $300 first prize to Wallace Stegner for *The Blue-Winged Teal*; $200 second prize to Gudger Bart Leiper for *The Magnolias*; $100 third prize to Robert Lowry for *Be Nice to Mr. Campbell.* MODERN LANGUAGE ASSOCIATION-MACMILLAN AWARD, $500 for a book of significant contribution to general understanding of English and American literature, to Kenneth Neill Cameron for *The Young Shelley: Genesis of a Radical.* NATIONAL INSTITUTE OF ARTS AND LETTERS GRANTS, $1,000 each to six non-member writers, for encouragement to young artists of ability and as practical recognition for more established authors: John Berryman, Paul Bowles, Maxwell Geismar, Caroline Gordon, Shirley Graham, Hyman Plutzik. NEW YORK DRAMA CRITICS' CIRCLE AWARD, given for the best play produced in New York city, to Carson McCullers for *The Member of the Wedding*; for the best foreign play, to T. S. Eliot for *The Cocktail Party*; for the best musical, to Gian-Carlo Menotti for *The Consul.* POETRY AWARDS, $1,250 for the best book of miscellaneous verse by an author who had published less than three books of poetry, to Frances Minturn Howard for *All Keys are Glass.* JOHN NEWBERY MEDAL, for the year's most distinguished contribution to literature for American children, to Marguerite de Angeli for *The Door in the Wall.*

Canada. GOVERNOR-GENERAL'S AWARDS. Silver medals awarded to Philip Child for *Mr. Ames Against Time* (fiction); to Robert MacGregor Dawson for *Democratic Government in Canada* (academic non-fiction); to Hugh MacLennan for *Cross-Country* (creative non-fiction); to James Reaney for *The Red Heart* (poetry); to R S. Lambert for *Franklin of the Arctic* (juvenile). CANADIAN CHILDREN'S BOOK OF THE YEAR AWARD, to R. S. Lambert for *Franklin of the Arctic.* LORNE PIERCE MEDAL, for achievement of special significance and conspicuous merit in imaginative or critical literature, to Marius Barbeau. LEACOCK MEDAL FOR HUMOUR, to Earle Birney for *Turvey.* TYRRELL MEDAL, for research in Canadian history, to John Bartlet Brebner. (R. E. Bs.)

LITERARY RESEARCH. The year 1950 was remarkable for important contributions from national and local records. A charter of King John, dated March 1203, granting to Saer de Quinci two villages near Oxford was discovered in an Oxfordshire barn and was deposited in the

Bodleian. The Kent county council bought an extensively grangerized edition of Edward Hasted's *History of Kent* for the county library. A selection of the more than 2,000 documents found at Lydney park was exhibited in July in the Shire hall, Gloucester: they comprised the official papers of Sir John Bankes (attorney general, 1634-40), including warrants, petitions and proclamations, many with the signature of Charles I, and were deposited in the Bodleian. Lord Clarendon placed in the Bodleian the papers of the 4th earl of Clarendon (foreign secretary 1853-58, 1865-66 and 1868-70), including 202 bound volumes and a large collection of unbound papers.

In biography light was thrown on the careers of many men of letters in the three volumes of the *Register of Admissions to the Honourable Society of the Middle Temple*, compiled by H. A. C. Sturgess (London). *The Times* (Feb. 23) described the finding of a signature of Dryden in the Middlesex records as a witness on a sacrament certificate of May 11, 1673. More details were published of the great collection of Boswell papers bought from Colonel Isham by Yale university: they included material not found in the printed editions of the *Life of Johnson* or in the *Tour to the Hebrides;* and Boswell's *London Journal, 1762-63* appeared, first in extracts in the *Sunday Times*, then in full. In *English*, no. 44, Bernard Martin printed six letters from John Newton to William Cowper (Aug. 18, 1767-Feb. 3, 1781), which were bought by the British Museum and catalogued as Egerton MS.3662. Vera Watson found in the Public Record office a muster roll of the 15th Light Dragoons in which Coleridge served as Silas Tomkin Comberbach: from this she showed (*Times Literary Supplement*, July 7) that Coleridge was discharged on April 10, 1794, on the fictitious plea that he was insane. A series of letters from J. S. Mill to A. de Tocqueville, edited by J. P. Mayer, appeared also in the *Times Literary Supplement* (Sept. 1, 8 and 15). In the field of *belles-lettres* and drama Theodor Wolpers contributed to *Anglia*, vol. 69, no. 1, a detailed account of *Englische Marienlyrik im Mittelalter*. In *The Library* (Sept.) Francis R. Johnson printed a fully documented series of *Notes on English Retail Book-prices, 1550-1640*. William Elton (*Times Lit. Supp.*, Feb. 24) described a new source of John Heywood's interlude *Johan Johan* in the *Farce Nouvelle . . . du Pasté*. In the binding of a copy of Anthony Cope's *Anniball and Scipio* (1544) S. Hodgson made a remarkable find which included a fragment of a poem by an unknown Thomas Alsopp on the same subject as Chaucer's *Man of Lawe's Tale*, as well as the last four leaves of a moral interlude, *The Four Cardinall Vertues* dating between 1541 and 1547 (a synopsis of this interlude was given by F. S. Boas in *Theatre Notebook* (Oct.-Dec.). Volume 22 of the L.C.C. *Survey of London* dealt with Bankside (the parishes of St. Saviour's and Christ Church, Southwark) and established the site of the former Globe theatre by reproducing for the first time a map discovered in the Guildhall showing that it stood on the south side of Maid lane (now Park street) near the place where it is crossed by Southwark bridge. A detailed *Bibliography of the Theatre of the British Isles excluding London*, compiled by Alfred Loewenberg was issued by the Society of Theatrical Research. Also helpful to research in the field of drama are the catalogue of the exhibition of "British theatre, 1530-1900," organized by I. Kyrle Fletcher for the National Book league; and *The Player's Library*, a catalogue of the British Drama league's library. (F. S. B.)

LITERATURE: *see* AMERICAN LITERATURE; AUSTRALIAN LITERATURE; BOOK COLLECTING AND BOOK PRICES; BOOK PUBLISHING; CANADIAN LITERATURE; CHILDREN'S BOOKS; CLASSICAL STUDIES; ENGLISH LITERATURE; FRENCH LITERATURE; GERMAN LITERATURE; ITALIAN LITERATURE; LITERARY PRIZES; LITERARY RESEARCH; NEWSPAPERS AND MAGAZINES; NEW ZEALAND LITERATURE; RUSSIAN LITERATURE; SCANDINAVIAN LITERATURE; SOUTH AFRICAN LITERATURE; SPANISH-AMERICAN LITERATURE; SPANISH LITERATURE; WORDS AND MEANINGS, NEW.

LITHUANIA. From Feb. 16, 1918, to Aug. 3, 1940, when it was annexed by the U.S.S.R., Lithuania was an independent republic. The British, U.S. and other governments, however, did not recognize the annexation. Area (including Klaipeda or Memel and Vilnius or Wilno territories): 25,173 sq.mi. Population: (Oct. 1939 est., including Vilnius, but excluding Klaipeda) 2,970,000, (1950 est., including Klaipeda) 3,000,000. Nationalities (Oct. 1939 est.): Lithuanian 69%, Polish 16%, Jewish 10%, Russian and Byelorussian 2·5%, others 2·5%. Religion (Oct. 1939 est.): Roman Catholic 80%, Protestant 7%, Greek Orthodox 2·5%, Jewish 9·5%, others 1%. Chief towns (pop., Oct. 1939 est.): Vilnius (cap., 207,800); Kaunas (152,400). Chairman of the presidium of the Supreme Soviet of the Lithuanian S.S.R., Justas I. Paleckis; chairman of the council of ministers, Mečislovas A. Gedvilas.

History. In a letter published in *Izvestia* on July 22 the working people of Lithuania expressed thanks to Stalin for having liberated their country from the capitalist yoke and saved them from annihilation. In fact, the main outcome of the so-called liberation was a great change in the population of the republic: between 1940 and 1950, in consequence of many mass deportations, it was estimated that the number of Lithuanians in the area including Klaipeda and Vilnius was reduced from 2,084,000 (66%) to 1,645,000 (55%). Real power in the Lithuanian government was vested in the Russian deputy prime minister, Vasily Ilyich Pisarev. During the year another Russian, Major General Petr Mikhailovich Kapralov, was appointed minister of state security.

Although a Lithuanian, Antanas J. Sniečkus, retained his nominal position of first secretary of the central committee of the Lithuanian Communist party, two Russians—Aleksandr S. Trofimov and Daniil Y. Shupikov—continued to control the party machine. In April a purge of the party was directed by Mikhail G. Pervukhin, a deputy prime minister of the U.S.S.R.: only 1,400 members and 2,400 candidates were certified as reliable.

Collectivization of agriculture made further progress and according to *Tiesa*, organ of the Lithuanian Communist party, there were in July 6,549 collective farms or *kolkhozy* comprising 76% of peasant holdings. From then began a drive to amalgamate smaller *kolkhozy* into bigger ones. Although Gedvilas stated in *Izvestia* of July 21 that industrial production in 1949 was 67% greater than before World War II (but neither year nor territory concerned was indicated), he complained on June 15 before the Lithuanian Supreme Soviet that many all-union ministries had not fulfilled Lithuanian contracts of machinery at dates agreed upon.

It was reported that the Roman Catholic bishop of Panevežys, Mgr. Kazys Paltarokas, died in March. This completed the extinction of the Lithuanian Roman Catholic hierarchy which in 1940 had comprised one archbishop, four bishops and the vicar general of Vilnius. According to an official Vatican source, by July 1950, out of 1,332 clergy left free until 1947, some 1,000 had been arrested and deported. On Oct. 17, at a meeting of "partisans of peace" in Moscow, Canon Juozas J. Stankevičius, administrator of the archbishopric of Kaunas and of the bishoprics of Kaišedorys and Vilkaviškis, spoke against "American aggression" in Korea.

On July 5 a decree of the presidium of the Supreme Soviet of the Lithuanian S.S.R. abolished the prewar districts and communes and introduced a new administrative division into

4 provinces or *oblasti* (Vilnius, Kaunas, Klaipeda and Šiauliai) and 87 *rayons*. In the elections of March 12 to the U.S.S.R. parliament 1,597,561 (99·88%) out of a possible 1,599,438 electors cast their votes: Lithuania elected 10 members to the Supreme Soviet and 25 to the Soviet of Nationalities.

Education. According to Gedvilas there were in October "almost half a million" pupils in all schools, including 170 secondary and 42 higher technical institutions; there were also 11,000 students in 11 institutions of higher education.

Finance. The 1950 budget was balanced at Rb. 1,352·9 million.

See *Current News on the Lithuanian Situation* compiled by the Lithuanian Legation, Washington, D.C. (K. SM.)

LIU SHAO-CHI, Chinese politician (b. Honan province, 1896?). He joined the Chinese Communist party (*Kungchantang*, or K.C.T.) in 1922. He was also a member of the secretariat of the trades unions' organization. He held several offices in the Kiangsi Communist republic (1931-34), took part in the "long march" (Oct. 1934-Oct. 1935) and helped to organize the Communist government at Yenan. From 1937 he was the head of the National Trades Unions organization. From Dec. 1937 he was a political commissar of the so-called New Fourth army, an autonomous branch of the Chinese national army organized from Communist forces. After the disbandment of the New Fourth army in the spring of 1941 by Generalissimo Chiang Kai-shek, Liu Shao-chi helped Mao Tse-tung to form an independent Communist armed force. After the Japanese surrender in Aug. 1945 he was sent from Yenan to Shanghai to reorganize the K.C.T. in that part of China which had been liberated by the Nationalist army. In the central government of the people's republic of China, formed in Peking on Oct. 1, 1949, Liu became one of six vice chairmen under the chairmanship of Mao. He was also secretary general of the K.C.T. and a member of its Politburo. He was considered the main channel of Soviet influence in the Chinese Communist government. In Nov. 1949, in Peking, addressing the Asiatic conference of the World Federation of Trade Unions, he forecast that "national liberation movements" would inevitably develop in a number of Asiatic countries.

LIVESTOCK. Postwar trends in livestock production became more sharply defined during 1950, particularly in countries where war economy had imposed a tendency to specialized output. For example, in England and Wales, which reflected conditions in the British Isles, whereas cattle showed a further increase of 3% (the September total was 7,931,000 head), the chief gains were in "other cattle" one year old and over, indicating a pronounced turn towards store-cattle raising and beef production; milk production continued at a high level (*see* DAIRY FARMING) and seemed all the more likely to become concentrated in herds of potentially high yielding stock and in places where feeding-stuffs could be entirely home-grown. Since imported feeding-stuffs were no longer subsidized costs were higher; and the rapid increase in production of dried grass from about 60,000 tons in 1947 to an estimated output of about 200,000 tons in 1950 showed how farmers were trying to meet the new situation. Disastrous harvest conditions in many parts of Great Britain threatened acute shortages of winter feed and led to a speeding-up of deliveries of fattened stock to the grading centres, though prices of store stock remained generally high even in late autumn. To increase meat production in Great Britain sheep-raising was steadily developed and pig-keeping very notably expanded. In Sept. 1950 returns for England and Wales showed increases over the 1949 figures of 8% for all pigs, of 24% for sows and gilts for breeding and of more than 50% for gilts in pig.

Noteworthy events of the year were the initiation of the new Attested Herds scheme, providing for progressive stages in the elimination of bovine tuberculosis, and the establishment of the Wool Marketing board. In the republic of Ireland the Land Rehabilitation project was expected to introduce fresh developments of meat production.

Elsewhere the same general tendencies—increasing efficiency in milk and butterfat production and attention to meat production—were expressed in different degrees and forms. In Europe consolidation of the stock industries continued. In Canada, while pig production still declined, the dairying and beef-raising industries were further developed. Argentina's position in the world meat trade was affected by reduced production following upon drought, as well as by international considerations. Industrial expansion in Australia raised the significance of her home consumption of livestock products, though the spectacular rise in wool prices emphasized the importance of the sheep section of the industry, which seemed likely to overshadow for a time some recent sound developments of beef-producing and dairying areas. Similar effects were foreseen in other wool-producing areas, such as South Africa, where local disturbances in the economy of the livestock industries would distract attention from the ecological and sociological considerations largely underlying the status and form of stock production. Changes in the constitution of stock populations in terms of breeds and types fitted for particular forms of output (*e.g.*, dairy *v.* beef or dual-purpose cattle, fine-wool *v.* mutton sheep) might be more significant than changes in population numbers, especially in areas where numbers were approaching saturation point in relation to the prevailing standards of agricultural technology. (J. E. N.)

United States. Pigs and cattle on U.S. farms in 1950 continued to increase in numbers, whereas the recent decline in sheep numbers to record low levels was arrested if not reversed. Cattle increased by about 2 million head, mostly beef cattle. More brood sows were kept because of the large feed grain supply. More chickens and turkeys were produced because of the favourable demand for eggs and poultry. Horses and mules continued to decline. The total farm value of livestock at the beginning of the year was $13,211 million as compared with $14,657 million a year earlier. Cattle accounted for nearly $10,000 million of the total. Livestock prices during 1950 followed divergent trends and were somewhat reversed as compared with 1949. High-grade beef was more abundant and lower in price, considerably below the new records of 1949. Lower-quality butcher stuff and feeder and stocker cattle were scarcer and higher in price, especially calves.

World. World horse numbers in 1950 were estimated to have continued their slow decline, with increases in some countries recovering from extensive war damage. World cattle numbers continued their upward trend. The estimate at the beginning of 1950 was about 771 million head, a record. This was about 7 million head more than a year earlier and 28 million head above the pre-World War II estimate. Significant increases occurred in all continents except South America where drought affected the situation in Argentina, Uruguay and Paraguay. World sheep numbers at the beginning of 1950 were estimated at 730 million head as compared with 724 million head a year earlier and 747 million head prewar. Decreases in the Americas

LIVESTOCK ON U.S. FARMS
(in thousands of head)

	Jan. 1, 1950	Jan. 1, 1949	Average, 1939-48
Horses	5,310	5,898	9,054
Mules	2,153	2,348	3,450
Cattle (incl. calves)	80,277	78,298	77,600
Milk cows	24,625	24,416	26,175
Sheep	30,797	31,654	48,112
Pigs	60,421	57,128	61,634
Chickens	481,190	448,676	486,369
Turkeys	6,120	5,540	7,056

and Asia were more than offset by increases elsewhere.

World pig production expanded in 1949, resulting in about 279 million head at the beginning of 1950, or 7% more than a year earlier and only 4% below the prewar average. (*See* also POULTRY; VETERINARY MEDICINE.) (J. K. R.)

LOCAL GOVERNMENT. No event of outstanding importance occurred during 1950. The political parties were so evenly balanced after the general election of Feb. 23 that major social reforms were not undertaken and the reorganization of local government was left to a more appropriate time.

The boroughs of Ilford and Luton promoted bills in the House of Commons to obtain county borough status. On the second reading of the Ilford bill, the minister of health, when asking that such proposals should be rejected until the House could look at the whole of local government, said on April 26:

" It is perfectly true that I suggested, when the Boundary Commission bill was before the House, that the government were giving their minds to the reorganization of local government. It is clear, however, from the divisions on all sides of the House that there is no common consensus of opinion here as to what the reorganization of local government should be. The ranks of Tuscany are divided: representatives of the county councils and the urban district councils and the boroughs are on all sides of the House. Therefore, in these circumstances and with the House so closely divided as it is, I do not think there is any immediate prospect of any minister of health—unless he is prepared to go into immediate voluntary exile—to bring proposals before the House for the radical reorganization of local government."

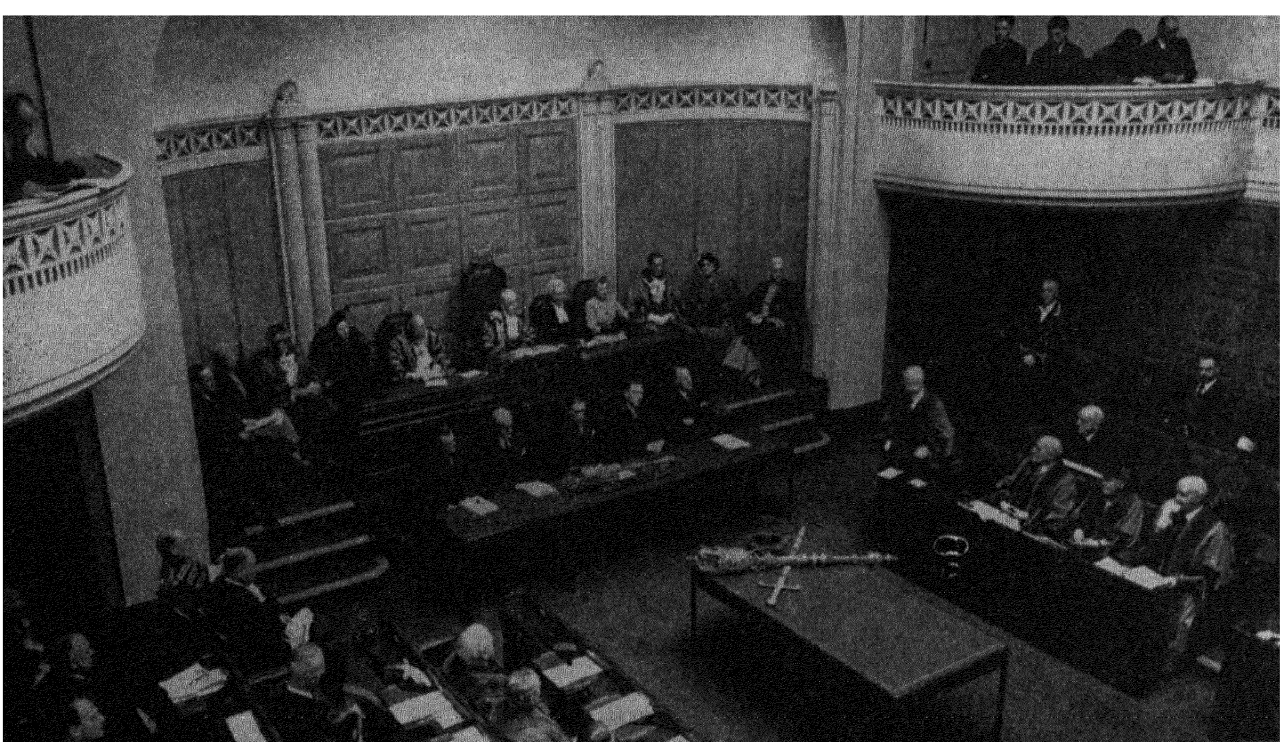
The bills were rejected.

At the close of 1949, the Justice of the Peace act received the royal assent and changes were made in the status of mayors and the rights and privileges of a number of the smaller but ancient boroughs in England and Wales. During his year of office a mayor was generally entitled to act as a justice of the peace and was usually regarded as the senior magistrate. He was also entitled to sit as a justice during the year following his year of office. In future, he would only act as a magistrate during the year that he was mayor. In addition, the custom which had grown up in many places by which the mayor, by virtue of his office, presided at meetings of justices, was taken away. He could still be chosen for that purpose by the justices but he could not act as of right or custom. In future, a separate commission of the peace would not be granted to a borough which had a population of less than 65,000. Many boroughs with a smaller population already had their own petty sessional courts and some had courts of quarter sessions. The privileges of a number of these boroughs were to be taken away although, within certain population limits laid down by the act, they might be retained and the lord chancellor was given a power to deal with special cases.

The second part of the report of the Committee on Police Conditions of Service, presided over by Lord Oaksey, was presented to parliament towards the end of 1949 (Cmd. 7831, H.M.S.O., London). This dealt with conditions of service and the management and control of the police and was the subject of much discussion. The most important recommendations related to the powers of appointment, promotion and discipline in borough forces in England and Wales; a proposal for a central examinations board for promotion examinations on the Scottish pattern; and the reconstitution of the Police council with executive powers of negotiation.

On Feb. 1, a change took place which marked a departure from a practice first adopted in the days of Queen Elizabeth. Part III of the Local Government act, 1948, came into operation on that date; assessment and county valuation committees and the central valuation committee ceased to exist and the preparation of valuation lists passed to valuation officers of the commissioners of inland revenue. By this act, the official expert was substituted for the representative of the local inhabitants and a function formerly within the sphere of local government passed to the state.

The first report of the Local Government Manpower committee was published as a White Paper in January (Cmd. 7870, H.M.S.O., London). It was based on a detailed study of the administrative working of a number of local government services and was directed towards a better use of the nation's manpower and the proper relationship between



The city council of Westminster meeting in the city hall in May 1950—the first council meeting in the hall which had been restored following bomb damage in 1940. On the right of the mayor of Westminster is the Lord Mayor of London.

central and local government. The committee consisted of representatives of the various associations of local authorities and representatives of government departments. The memorandum of guidance prepared by the committee for the assistance of its sub-committees contained the following striking passage:

To recognize that the local authorities are responsible bodies competent to discharge their own functions and that, though they may be the statutory bodies through which government policy is given effect and operate to a large extent with government money, they exercise their responsibilities in their own right, not ordinarily as agents of government departments. It follows that the objective should be to leave as much as possible of the detailed management of a scheme or service to the local authority and to concentrate the department's control at the key points where it can most effectively discharge its responsibilities for government policy and financial administration.

A committee was set up for Scotland which published a report on very similar lines in May (Cmd. 7951, H.M.S.O., London).

A Consultative Committee on Publicity for Local Government was established in 1946 under the chairmanship of the parliamentary secretary of the Ministry of Health, which published a final report in Feb. 1950. In this the committee dealt with the general publicity activities of local authorities and they referred again to the relations of local authorities with the press. They undertook a useful investigation into the work of spreading an understanding of local government through existing educational organizations.

The year 1950 marked the golden jubilee of the metropolitan boroughs. These were created by the London Government act, 1899, and the first elections took place on Nov. 1, 1900. One of their links with the London County council was severed during the year. As a result of the views expressed by the Local Government Manpower committee, the London Government act, 1950, was passed and metropolitan boroughs would in future go to the Ministry of Health for loan sanctions instead of to the London County council. (G. H. Bl.)

United States. *Finance.* Whereas municipal budgets practically doubled during the decade 1940-50, between 1949 and 1950 there was a tendency to stabilize operating expenditure, which was reflected in 1950-51 budget figures. At the same time, increased outlays for new projects deferred during World War II and the immediate postwar period raised the level of municipal budgets in most cases. A number of cities established their budgets on a work programme or performance basis in 1950, notably Los Angeles and Los Angeles county; San Diego, California; Kansas City and Slater, Missouri; Phoenix, Arizona; Kissimmee, Florida; and Richmond, Virginia. Census bureau data on the 1949 finances of the 397 cities with a population exceeding 25,000, published in 1950, likewise confirmed the halt in revenue and expenditure increases. The revenue figures reflected a gradual trend away from the general property tax toward new sources of municipal revenue, and the marked gains in debt and capital outlays measured the progress in postwar spending for capital improvement. Increased state aid had been granted by most of the 44 state legislatures meeting in 1949; most frequently for schools, highways and welfare; aid for general purposes through state-shared taxes also increased. Outstanding gross debt in 1950 reached a record high level on all local government levels. City obligations, which comprised more than half of all local government debt, reached $10,100 million, as compared with $9,500 million in 1949.

Although city government employment continued its postwar growth, there was an approach to stabilization of the average earnings of city employees. City employees in Oct. 1950 numbered 2% more than in Oct. 1949, and pay rolls increased 3·6%; the increase in 1949 over 1948 was 3% in the number of employees and 4% in pay rolls.

Civil Defence. Test exercises were held in three widely separated cities, Washington, D.C., Seattle, and Chicago, in June, July and September, respectively, under the auspices of the National Security Resources board. The Chicago Civil Defence corps published the Chicago experience under the title *Chicago Alerts.* A survey by the United Press published on Dec. 15, 1950, indicated that although no cities were yet ready to cope with an atomic attack, ten of the biggest cities were well ahead in their preparations, with Chicago leading the way. The others were: New York city, Philadelphia, Washington, Milwaukee, Detroit, Kansas City, Seattle, Minnesota-St. Paul and Boston. Many other cities, especially smaller ones not reported, were presumed to be doing equally well, though many more had not taken even elementary steps, expecting the participation of the federal government. An enlightening report on *The Status of Civil Defense in American Cities, November 1950,* incorporating verbatim reports of officials of nearly 150 cities, was published by the American Municipal association.

Housing and Rent Control. The public housing and urban redevelopment programmes authorized under the Housing act of 1949 were well under way in 1950, though the former had to be somewhat curtailed because of defence needs. At the close of 1950, 849 communities with a combined population exceeding 25 million and containing 3,750,000 rental units had voted to continue federal rent ceilings until June 30, 1951. In communities failing to take such action by March 31, 1951, rent ceilings would expire on that date. It was estimated that in Nov. 1950 about 7 million housing units had been decontrolled since adoption of the first decontrol measures in 1949. A major controversy developed in Los Angeles between tenant and landlord groups after the action to decontrol was taken by the city council; landlord groups finally organized to help the policing of rent decontrol by hearing tenant complaints. The rise in rents for the first ten months of 1950 was 2·2%.

Organized Crime. Largely through the initiative of the American Municipal association, which called for federal investigation of the entire problem of inter-state gambling rackets and allied operations and for legislation prohibiting the transmission of gambling devices and betting information across state lines, a Senate crime investigating committee was appointed in May under the chairmanship of Senator Estes Kefauver. After hearings in key cities, the committee found that well organized criminal groups were operating throughout the country with "interlocking ownership and directorship between all groups," and that organized crime was wielding "a very sinister and very great" influence on public officials. Chicago appeared to be "perhaps the one most important centre of criminal activities," although extensive organizations existed in New York city, Philadelphia, Los Angeles, Miami, San Francisco and many other cities. In all cities, the committee found, the situation was made possible through the "connivance and acquiescence of local enforcement officers." Several shake-ups occurred as a result of the committee's disclosures, particularly in the police departments of New York and Philadelphia, while a purging of the Chicago police department appeared imminent. A legislative ban against the shipment of slot machines into all states except those specifically legalizing them was adopted by congress at the close of the year. (A. M. Ds.; L. Gu.)

LOCKOUTS: *see* Strikes and Lockouts.

LONDON. The largest city in the world, the largest port, the largest industrial town in England, the capital city of the United Kingdom and the centre of the Commonwealth. London consists of the county, comprising the 28 metropolitan boroughs (area, 117 sq.mi.; pop., Dec. 1949 est., 3,411,000); the City, the ancient heart of London (area 1·05 sq.mi.; resident pop., Dec. 1949 est., 4,661); and



The body of Field Marshal Earl Wavell, Constable of the Tower of London, being borne by river in June 1950 to Westminster for services in Westminister Abbey. Earl Wavell was buried in Winchester College.

greater London of about 15 mi. radius from Charing Cross, sometimes identified with the Metropolitan and City police areas (about 690 sq.mi., pop., Dec. 1949 est., 8,436,140), comprising the whole of Middlesex and large parts of Kent, Essex, Surrey and Hertfordshire. Chairman of the London County council, J. W. Bowen; lord lieutenant of the County of London, Field Marshal Viscount Alanbrooke; lord mayor of London, Sir Frederick Rowland, and, from Nov. 8, 1950, Denys Lowson.

History. The steady growth of the Festival of Britain buildings transformed the London landscape on the south bank of the Thames adjoining County Hall. More satisfactory to the Londoner was the improved progress with repairs to war-damaged buildings, public and private. In the City, in Walbrook and Old Jewry, many-storied buildings already soared into the air where but recently archaeologists had raced against time to salve fragments of Roman London from the jaws of the mechanical excavators. In May the King opened the new laboratories of the National Institute for Medical Research in Mill Hill, and in June the restored college dormitory at Westminster school, originally designed by Sir Christopher Wren. In January the time-honoured chimes were re-installed at the Royal Exchange. The Lord Mayor's Easter banquet was held in the restored Egyptian hall at the Mansion House. In July services were held for the first time since 1941 in Chelsea Old church, in Sir Thomas More's Chapel, the least-damaged portion of the building, temporarily re-roofed.

The most momentous achievement in the re-building of war-damaged buildings was the completion of the new chamber of the House of Commons, retaining the architectural style and internal arrangement of its predecessor with modern improvements in acoustics, air conditioning, etc., and with the addition, in the approach to it, of a commemorative Churchill arch built of bomb-damaged masonry from the old chamber. It was formally occupied for the first time on Oct. 26 with a simple but moving ceremony after which the Commons went to Westminister hall to be received, with members of the House of Lords, by the King, to whom addresses were presented, with a noble and festive ceremonial. The new parliament elected on Feb. 23 was opened by the King on March 6 with customary pageantry. The next day the French president and Mme. Auriol arrived on a state visit. They were entertained at banquets at Buckingham palace and Guildhall and at a reception at Burlington house at the exhibition of " Landscape in French Art." They were also formally received at Westminster hall by the lord chancellor, the speaker and both houses of parliament. In November the three-day state visit of Queen Juliana of the Netherlands and the Prince of the Netherlands was the occasion for similar festivities. In November the Lord Mayor's show significantly featured civil defence.

On June 8 the body of Field Marshal Earl Wavell was brought by water from the Tower, of which he had been constable, to Westminster abbey for a funeral service preceding burial in the cloister garth at Winchester college.

In 1950 the 28 London boroughs reached their half-century, having held their first elections in 1900 when George Bernard Shaw (*see* OBITUARIES) was the only Socialist to gain a seat (St. Pancras). Half-a-century demonstrated the value of preserving (despite a perhaps excessive centralization of some classes of activity) the local spirit and loyalties of the old vestries which the boroughs replaced. The population of the County of London in 1950 greatly exceeded the maximum proposed by the London Plan (3,150,000). For an estimated postwar need of 250,000 new homes in the county, there were provided up to March 1950, 47,000 new permanent and temporary dwellings; 6,625 bombed houses had been rebuilt and 76,645 repaired. At the end of World War II the L.C.C. had 65,000 names on the waiting-list for houses; a 1950 figure was 165,000. Applications with the boroughs were estimated at about 200,000.

In the London transport system certain tram and trolley-bus services, over about 40 mi. of route, were replaced by buses. This affected Wandsworth, Chelsea, Westminster, Camberwell, Southwark, Finsbury and Holborn. On Oct. 1 there was an increase in fares on the London transport system; in June taxicab fares were raised by one-third as a corollary to a strike of drivers employed by proprietors' organizations.

In April an unofficial strike of over 11,000 stevedores, lightermen and dockers seriously hampered work in the Port of London, and another, lasting from June 27 to July 23, involving nearly half the dock labour of the port, necessitated the use of military labour to unload perishable cargoes. A similar strike of Smithfield drivers in June jeopardized meat supplies to maintain which troops were also used. In September and October an unofficial strike of gas maintenance men caused inconvenience domestically and to industry. A compositors' strike in October interferred with the production of weekly papers. In the Port of London the work of reconstruction of war-damaged piers and wharves continued and restoration of the authority's building in Tower Hill began. Additional piers at Blackfriars and Old Swan stairs (London bridge) were to be built to deal with increased

river passenger traffic in the Festival year. The total tonnage of goods that arrived in and departed from the port in the year ended March 1950 was 32,597,761, one million more than the preceding year and only two million less than 1939.

An event in the artistic life of London was the exhibition at the Royal Academy in the autumn of family art treasures from Woburn abbey lent by the Duke of Bedford. The winter exhibition, 1950-51, at the Royal Academy opened in December with works by Hans Holbein and painters of the 16th and 17th centuries. Repairs to war damage at the national museums enabled further galleries to be reopened. The carpet executed by Queen Mary and given by her for sale for dollars for the Exchequer was exhibited at the Victoria and Albert museum in the summer. Kenwood house was again opened to the public; Ham house, Richmond, was given to the National Trust and as a branch of the Victoria and Albert museum opened to the public with its complete furnishing of the Carolean period; Syon house, Brentford, with its gardens and park, was opened to the public by the Duke of Northumberland during the summer months. At Guildhall the principal objects of Roman origin that came to light at Walbrook and elsewhere in London, during foundation-digging for new buildings on bombed sites, were assembled in the museum. In the bombed area between Cripplegate and Gresham street the discovery of foundations of a Roman fort outside the previously known Roman wall-circuit gave a new military significance to Roman London. The publication of the 23rd volume of the L.C.C.'s *Survey of London* dealing with Bankside and the parishes of St. Saviour and Christchurch, Southwark, located, with the help of a 17th century map recently discovered at Guildhall, the site of Shakespeare's Globe theatre on the south side of Maid lane (later re-named Park street) at about the point where it was crossed by Southwark Bridge road.

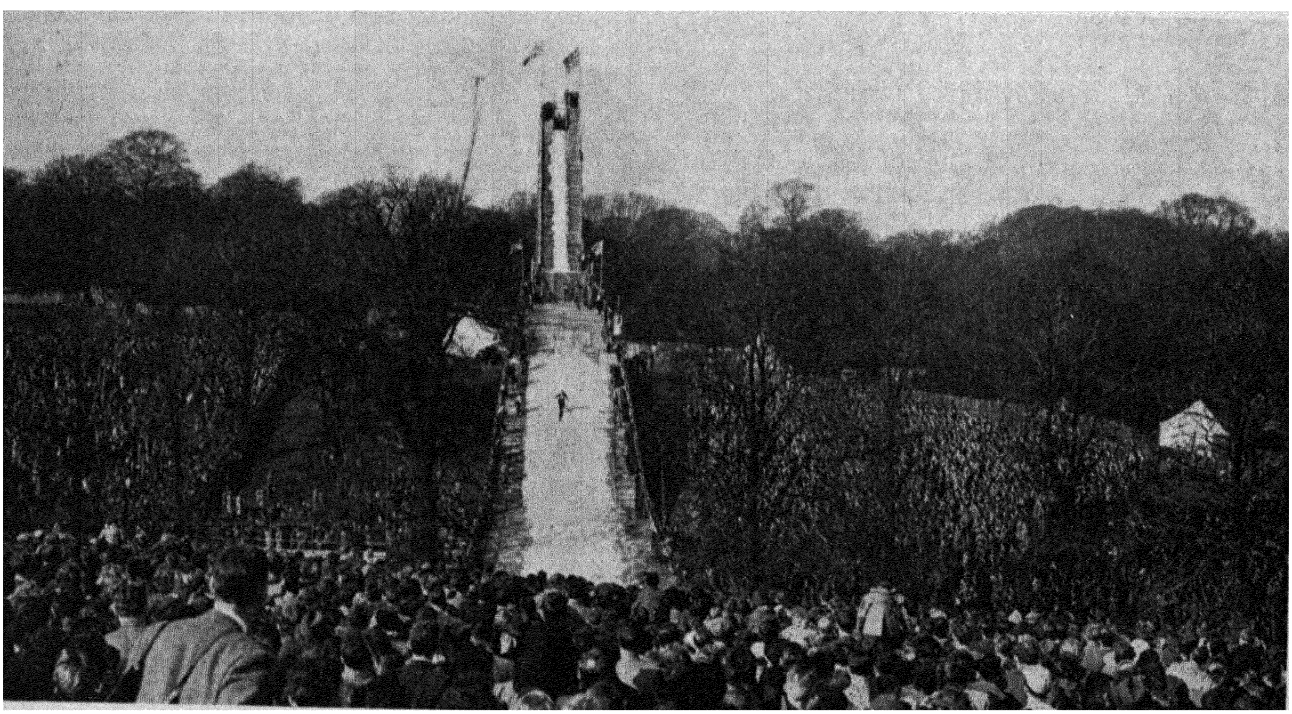
An event of prime theatrical interest was the reopening in November of the Old Vic theatre in Waterloo road, with the Old Vic company in *Twelfth Night*. In May Sadlers' Wells ballet celebrated its coming of age in the presence of Princess Margaret. In the autumn the Scala opera company from Milan were visitors to the Royal Opera, Covent Garden.

One of the most startling events of the year was the theft in the early hours of Christmas morning of the variously named Coronation stone, Stone of Scone or Stone of Destiny, from its place beneath the Coronation chair in Westminster abbey. It was suspected from the first that Scottish Nationalists were responsible, and this supposition was strengthened when on Dec. 29 an anonymous petition to the King, purporting to be from those who took the stone, was discovered at a Glasgow newspaper office. A nation-wide search failed to uncover any trace of the missing relic by the end of the year. (D. NN.)

LONDON UNIVERSITY. The university's building programme suffered retardation as one of the government's measures of retrenchment to meet the economic crisis, but good progress was made in projects already begun, notably reconstruction after war damage at Bedford college, University college and the university library, and extensions to King's, Imperial and Queen Mary colleges and to University College Hospital Dental school.

The Royal Veterinary college was granted full status as a school of the university. Two new institutions were founded, both accommodated in temporary premises in Russell square: the Institute of Commonwealth Studies, whose first director was W. K. Hancock, lately Chichele professor of economic history at Oxford, and the Institute of Germanic Languages and Literatures, whose first honorary director was L. A. Willoughby, lately professor at University college, London.

At the end of the 1949-50 session the number of full-time students at grant-receiving schools and institutions of the university was about 18,000, and there were a further 5,500 internal students in institutions with recognized teachers. The number of professors was 325 and there were 221 readers. The record figure of £32,000 was awarded in 112 postgraduate studentships and fellowships. In view of the importance of encouraging study abroad, the senate decided to devote part of its reserve for the current quinquennium to increasing the fund for travelling studentships. The number of external students, including those overseas, was 31,042.



Ski-jumping, on snow brought from Norway, on Hampstead Heath, London, in March 1950. This was the first time ski-jumping had taken place in London. Skiers from Norway and from Oxford and Cambridge universities took part.

of whom about one-third studied at technical colleges and one-tenth privately.

Under the scheme of special relationship between the university and colonial colleges, 266 students were registered for London degree courses at Gordon college, Khartoum; University college, Ibadan; University College of the Gold Coast; University College of the West Indies; Makerere college, Uganda. Examinations were held for the first time at the university colleges of the Gold Coast and Ibadan. Arrangements for the courses at these colleges included about 60 modified syllabuses and necessitated advisory visits from members of the university.

A university press was instituted under the name of the Athlone press, to increase the facilities for the publication of works of scholarship by members of the university. The university received a gift of the highest importance in Sir Percival David's unique collection of Chinese ceramics together with his library of books on Chinese art and culture. Until a special building could be erected for the collection it would be housed in premises purchased from the Duke of Bedford.

The chancellor (the Earl of Athlone) and the vice chancellor (Lillian M. Penson) were present at the installation in February of Princess Alice as first chancellor of the University College of the West Indies. The principal of the university (D. W. Logan) was one of the British delegates to the conference of Commonwealth universities held in New Zealand.

The deaths occurred during the year of Professor H. Gordon Jackson (master of Birbeck college), Professor Harold Laski (London School of Economics), Professor Samuel Sugden (University college), Sir Ernest Graham-Little (the former M.P.) and Mr. F. W. Twort (former superintendent of the Brown institution). (J. H. Ps.)

LORDS, HOUSE OF: *see* PARLIAMENT, HOUSES OF.

LUTHERANS. During 1950, 42 member churches of five continents were working co-operatively and actively through the Lutheran World federation. More than one out of every ten among the 60 million Lutherans in the world was a refugee. Groups of refugees in central Europe, the middle east and Asia were receiving physical relief, a spiritual ministry, aid in resettlement and opportunities for rebuilding. More than 80,000 had been resettled in Canada, the United States, Australia and South America. The assistance to younger churches and orphaned missions became an international operation when missionary groups of the churches of Finland, Sweden, Norway and Denmark joined with the bodies in America to support and conduct the missions in Africa, Indonesia, India, Palestine and New Guinea.

The focal point of Protestant resistance to totalitarianism was Eastern Germany. There 14 million to 16 million Lutherans were giving an evidence of their loyalty to the Christian faith and the organized church in spite of increasing pressure and persecution. These churches, since the change from a state church to disestablishment, had organized a thorough programme of Christian education, activities for the youth groups and service to pastors. Bishop Otto Dibelius had rallied the support of almost all the pastors of the eastern zone for this battle. The Lutheran World federation made plans for its second quinquennial assembly in Hanover, Western Germany, for the summer of 1952.

The leadership of several Lutheran churches changed during 1950. Bishop Lajos Ordass, the first casualty among religious leaders in eastern Europe when he was sentenced to imprisonment in 1948, was deposed as head of his diocese by a church court which was under state influence. Bishop Laszlo Dezsery, a Communist, was elected to succeed Ordass. Yngve Brilioth became the primate of the Church of Sweden when he was elected archbishop of Uppsala upon the retirement of Archbishop Eidem. Bishop Eivind Berggrav, who led the church struggle against naziism resigned from the appointment of primate of the Church of Norway because of ill health. Henry F. Schuh was elected president of the American Lutheran Church to succeed Emanuel Poppen. Lawrence Stavig, president of Augustana college, Sioux Falls, South Dakota, was elected chairman of the National Lutheran council. (C. E. L.-Q.)



Princess Alix, youngest daughter of Grand Duchess Charlotte of Luxembourg, and Prince Antoine de Ligne after their marriage on Aug. 17, 1950.

LUXEMBOURG. Independent grand duchy of western Europe bounded S. by France, N.W. by Belgium and N.E. by Germany. Area: 999 sq.mi. Pop.: (Dec. 31, 1947, census) 290,992; (July 1, 1949, est.) 295,000. Language: Luxembourgian (idiomatic) and (officially) French. Religion: Roman Catholic 98%. Capital, Luxembourg (pop., Aug. 1949 est., 62,000). Ruler, Grand Duchess Charlotte; prime minister, Pierre Dupong.

History. No inner crisis or change in government occurred in 1950 except the resignation, on Sept. 2, for reasons of health, of the minister of economic affairs and agriculture, Aloyse Hentgen. François Simon, hitherto director of public works, succeeded him.

In the general trend of events, the government speeded up military preparations, extended the term of military service from six months to one year (Aug. 30) and decided to send a detachment of Luxembourg troops to Korea. Luxembourg was amongst the nations to accept in principle the Schuman plan. The steel industry, after a short interval of slightly lowered production in the first part of the year, was very busy and towards the year's end exceeded the 1949 output.

An agreement was signed in Washington on Jan. 27, 1950, between Luxembourg and the U.S., regulating mutual aid for common defence purposes.

The grand duchess paid state visits to the pope and to the president of the Italian republic from April 25 to 30. The wedding of Princess Alix, youngest daughter of the grand

duchess, with Prince Antoine de Ligne, on Aug. 17, was the occasion of public rejoicings and loyal demonstrations.

The full economic union of Belgium-Luxembourg with the Netherlands which was scheduled to come into force by July 1, 1950, could not be realized at that date. Ministers of the Benelux countries met in Luxembourg on Oct. 20-21 and agreed to a system of modernization for Luxembourg-Belgian agricultural production, in order to lower costs of production; the Netherlands would gradually abolish subsidies to farmers. In spite of great efforts Dutch goods imported into Luxembourg and Belgium would still be artificially raised in price by a tax, to be divided between exporting and importing countries. The principle of proceeding by stages to complete freedom of exchange for the Benelux countries was firmly maintained. Passports were no longer required for travel between the three countries.

Education. Schools (1948): elementary 966, secondary 7, technical 3.

Industry. Total of persons employed (June 1950): 35,355. Production (in metric tons, 1949; 1950, nine months, in brackets): pig iron 2,372,080 (1,775,125); steel ingots and castings 2,277,858 (1,741,696); synthetic fertilizers 502,351 (six months, 226,251).

Finance. Budget (1950 est.): revenue Fr. 2,996,265,000; expenditure Fr. 3,890,992,058. Monetary unit: Luxembourg *franc*, at par with the Belgian franc, with an exchange rate of Fr. 140 to the £ and Fr. 50·50 to the U.S. $.

See Paul Weber, *Histoire de l'economie luxembourgeoise* (Luxembourg, 1950); also *Biographie Nationale*, vols. 1 and 2 (Luxembourg, 1950). (H. R. ML.)

MACAO: *see* PORTUGUESE COLONIAL EMPIRE.

MACARTHUR, DOUGLAS, U.S. army officer (b. Little Rock, Arkansas, Jan. 26, 1880). (For his early career, see *Encyclopædia Britannica.*) As commander of the southwest Pacific forces he accepted the Japanese surrender in Tokyo bay on Sept. 2, 1945, and was made supreme commander of the Allied powers in Japan. When the North Koreans invaded South Korea in June 1950, MacArthur was ordered to help to defend South Korea with U.S. air, sea and ground forces. After a majority of the U.N. Security council had branded North Korea an aggressor, he was appointed commander of U.N. forces in Korea. As early as July 20 he announced that the first phase of the campaign had ended and so had the North Koreans' chance for victory. On July 31-Aug. 1 he conferred in Formosa with Chiang Kai-shek on plans to defend Formosa in case of a Chinese Communist attack. President Harry S. Truman conferred with MacArthur on Wake Island on Oct. 14 (U.S. time) and the president announced "complete unanimity" of views on pacifying, unifying and reconstructing Korea. On Nov. 6 MacArthur notified the U.N. that his forces had come in contact with Chinese Communist units. On Nov. 24 he announced that a new attack being launched should, if successful, end the war, but on Nov. 28 he told the U.N. his forces were up against an "entirely new war." On Dec. 11 he announced that the U.N. forces withdrawing ahead of the Chinese Reds were "relatively secure," and his field commanders in later statements implied that U.N. forces could remain in Korea indefinitely.

McCARTHY, JOSEPH RAYMOND, U.S. senator (b. Grand Chute, Wisconsin, Nov. 14, 1909). After graduating from Marquette university, Milwaukee, Wisconsin, in 1935 he practised law until 1939 when he was elected circuit judge. He was then 30 years of age, the youngest man in Wisconsin's history to hold such a post. From 1942 to 1945 he served overseas with the U.S. marines. During this time his friends put up his name for nomination to the U.S. Senate and though he received 100,000 votes he ran second. In 1945 he was re-elected circuit judge. In 1946 he defeated Senator Robert La Follette for the Republican nomination to the U.S. Senate, and in the subsequent November balloting was elected for a six-year term ending on Jan. 3, 1953. In the U.S. Senate McCarthy was especially known as an investigator of Communism in high places in the government. His tenacious tactics and frequently sweeping accusations won for him many enemies, though he held a large popular following as well. The word "McCarthyism" became synonymous with the attitude he showed towards those suspected of Communist sympathies. He was especially dogged in his attacks on the State Department and on Dean Acheson, secretary of state, for what he called the protection of those accused of sabotaging U.S. efforts to contain the U.S.S.R.

MACDONALD, MALCOLM JOHN, British colonial administrator (b. Lossiemouth, Moray, Scotland, 1901), was the son of J. Ramsay MacDonald, the first Socialist prime minister, and was educated at Bedales school and Queen's college, Oxford. He was elected to the House of Commons in 1929, was defeated in 1935, but returned the following year and sat until 1945. From Nov. 1931 until June 1935 he was parliamentary under secretary for the dominions, and from 1935-38 and in 1938-39, secretary of state for the dominions. He was also secretary of state for the colonies in 1935 and in 1938-40. In 1940-41 MacDonald served as minister of health in the coalition government and then for five years as high commissioner in Canada. In the summer of 1946 he was sent by the Labour government to Malaya as governor general for the Malayan union, Singapore, North Borneo and Sarawak, and in 1948 was appointed to the newly created post of commissioner general for southeast Asia. On Dec. 27, 1949, he was at Batavia (Jakarta) as the special representative of the British government on the occasion of the independence of Indonesia. In Jan. 1950 MacDonald attended the first meeting of Commonwealth foreign ministers in Colombo, Ceylon, and later in the year attended other Commonwealth meetings in Sydney and London on aid to south and southeast Asia. In April he visited Rangoon for discussions with the Burmese government, in June met Bao Dai in Indo-China and visited Hong Kong in August. After the Commonwealth meetings in London he had talks with the British government. He paid a private visit to Ottawa, and went twice to Paris for discussions with French ministers. In London in November he stated that progress against the terrorists in Malaya would probably be slower because the position in Malaya was very "sensitive to events in neighbouring countries." In Oct. 1949 he became first chancellor of the University of Malaya.

MACHINERY AND MACHINE TOOLS. Throughout 1950 the makers of various types of machinery operated at the maximum level permitted by the available supplies of labour, materials, electrical equipment and components. At the same time, there was no evidence of any general slackening of demand, and in many instances the volume of orders in hand at the end of September was greater than at the beginning of January. The monthly value of agricultural machinery produced, which had shown a reduction from £5,766,000 for 1948 to £5,325,000 in 1949, rose to £6,883,000 for the first six months of the year. Output of textile and hosiery machines also continued to advance and the average monthly value in Jan.-June 1950 was £5,820,000, compared with an average of £5,590,000 in 1949 and £4,700,000 in 1948.

Of all industrial machinery producers, the machine tool builders were still the most hard-pressed in attempting to satisfy demand, and for certain types of machines quoted delivery periods were measured in years rather than in months. In Jan.-July 1950 the average monthly value of machine tools produced exceeded £3 million for the first

time since World War II. The effects of the rearmament programme were not fully manifest, but it was evident that, if supplies of metal goods for export and for the home market were not to be seriously curtailed, the pace of re-equipment in the engineering industries would have to be increased. In the circumstances this could only be achieved by temporarily curtailing machine tool exports or by increasing imports.

Exports classified under the general heading of machinery for the nine months Jan.-Sept. 1950 were valued at £232,610,000 compared with £207,751,000 for the corresponding period of 1949. Part of this increase was due to higher prices, caused to some extent by devaluation of sterling, since the export tonnage in 1950 was only 6¼% greater than in 1949 whereas the increase in value was nearly 12%. Textile machinery was again the most important of the main groups, with an export value of £30,335,000 in the first nine months, a slight decrease on the figure for the same period of 1949; tonnage fell from 85,300 in the first nine months of 1949 to 78,850 in the same period of 1950. Machine tool exports in the Jan.-Sept. period amounted to 34,440 tons (Jan.-Sept. 1949, 34,620 tons) valued at £12,528,000 (£12,138,000). India was the most important market for British machinery during the period, with a total of £27,743,000.

To stimulate trade with Canada the most important display of British machine tools ever staged outside the United Kingdom was a feature of the Toronto fair held in May and June. Most of the participants expressed satisfaction with the number of orders and enquiries received, but at the end of 1950 it was too early for the full effects to be reflected in trade returns. It was noted, however, that machine tool exports to Canada rose from £174,000 in 1949 (first nine months) to £678,000 in the same period of 1950. Owing to the deterioration in the international situation, fresh restrictions were imposed, during the latter part of the year, on exports of machine tools to certain countries.

In view of the pressure of demand to which machine tool builders were subjected, the amount of technical progress achieved was reasonable. An outstanding event was the completion and installation of the first British-built automatic transfer machines, which were also the first of their type to go into operation in this country. Such machines had been used extensively in the U.S. and their appearance in the United Kingdom might be said to have marked the beginning of a new era in metal-working technique there. It had long been the practice in quantity production to arrange individual machines in line for performing successive operations on a given component, such as a cylinder head. The automatic transfer machine, which is the logical development of this trend, is, in effect, a fully automatic machine line. Work is loaded at one end and thereafter is moved automatically from station to station, so that the various tools may perform their functions, without the work being otherwise handled. Apart from the question of volume of production, self-sufficiency as regards types of machines had not been achieved in the United Kingdom, but an important step in this direction was the introduction of a multi-spindle automatic lathe of larger capacity (2⅜-in. bar) than had hitherto been built outside the U.S. (C. H. Bu.)

United States. The machine tool industry of the U.S. soared in 1950 to the greatest heights since World War II. New orders exceeded $700 million, more than three times the amount of the previous year. Motor car manufacturers gave the biggest impetus to machine tool operations with big retooling programmes, mostly for new V engines. Their expenditure ran to $200 million, about twice that of the best previous year in the 1930s. It was not until late in the year that defence orders began to pour into builders' offices. It was estimated at the end of the year that total defence tooling would require more than $1,000 million worth of machine tools. In expectation of war mobilization, so-called "phantom" orders for machine tools were placed with machine tool builders in 1948. These were paper orders for specified quantities of machines. They could be activated overnight by telegram from Washington. Preparations were under way at the end of 1950 to put these orders, totalling $800 million, on a live basis.

Great strides were made technically during 1950. Much of the progress came as a result of work on machining problems in the aircraft industry. A report was made public on the relationship of a metal's microstructure to its machinability. It showed how the optimum rate for machining a given material could be predicted if the material's microstructure and the processing of the material before machining were known. This report resulted from a study made by the Ford Motor company at the request of the U.S. air force.

High-speed machining gained new converts during the year. Milling at very high feeds revealed that neither work nor tool heated excessively. It was found that the horse-power needed for milling dropped as the speed for machining increased. One New England company discovered that it got better tool life by face milling cast iron at 500 to 700 ft.p.m. (feet per minute) than at 300 ft.p.m. But when high speeds were used, from 1,500 ft.p.m. upwards, tool life decreased as the speed increased. Tools and techniques were developed for climb-hobbing of cast iron gears at 450 r.p.m. with 0·060-in. feed, and SAE 4135 gears at speeds up to 702 r.p.m. with 0·100-in. feed in each case using carbide hobs of 4 in. diameter. These speeds approximated to 460 and 725 ft.p.m. Speeds of machining lines and of special transfer or shuttle machines had been limited by permissible drilling speeds. Several machinery builders were working on high-speed drilling machines for cast iron, using special heavy-duty carbide drills. One maker reached a feed of 1 in. per sec. (almost punching) with a ½-in. diameter carbide drill.

Ease of operation, flexibility of control and adaptability to job work as well as to mass production was featured in new machines during 1950. Mechanical shift levers at the front and side of a vertical boring mill were eliminated, for instance, in favour of a pendant station and solenoid that activated a hydraulic-shift mechanism. A universal grinder was equipped with wheel base, headstock and work table which could be swivelled, and thus operated from front or rear. A lapping machine was offered which could load and unload small parts continuously and automatically. A right-angle chucking lathe was developed for facing, turning and boring thin-walled work of large diameter and short length, displacing cumbersome straight-line lathes for this class of work.

The U.S. air force set up at Adrian, Michigan, a manufacturing-methods pilot plant to which industry could bring its extrusion and forging problems. Hydraulic forging was done at this plant simply by pressing the metal billet between two dies with such force that it assumed the desired shape with one stroke. (*See* also Electronics.) (B. Fy.)

MADAGASCAR. Fourth largest island of the world situated off the S.E. coast of Africa; a former French colony the status of which was changed in 1946 to that of an overseas territory. Areas and populations are:

	Area (sq.mi.)	Population (1936 census)	Population (1948 est.)
Madagascar (with smaller dependencies)	228,589	3,669,328	4,160,000
Comoro archipelago	849	128,608	141,800
Total	229,438	3,797,936	4,301,800

The Malagasy tribes are many, the most important being the Hova (24% of the total) whose language is understood over a large part of the island; in 1948 there were 31,171 French including 15,638 from metropolitan France; Hindus, Chinese

and Arabs constitute small racial minorities in Madagascar. Religion: Madagascar, Christianized to some extent but mainly pagan; Comoro archipelago, Moslem. Chief towns (pop., 1948 est.): Antananarivo or Tananarive (cap., 171,052); Tamatave (28,194); Majunga (27,181); Diego-Suarez (25,287). High commissioner, Governor General Robert Bargues.

History. There was complete peace among the tribes in 1950. The six Malagasy condemned to death on Oct. 4, 1948, for conspiracy, whose penalties were commuted to deportation to life to Mohéli (Comoros), were permitted on Oct. 2, 1950, to transfer to Calvi (Corsica). Native nationalism, although apparently quiescent, was none the less distinctly alive and was quickened by the continual activity of the Communist party which operated particularly under cover of trade unions. It disputed the efficacy of the proposed reforms of the local assemblies, demanded faster evolution towards the status of an associated state and protested against projects for European immigration, to include Italians, then under consideration. Robert Bargues, the new governor, directed his efforts on the one hand to the introduction of a road system and on the other to the exploitation of the Sakoa coalmines S.-E. of Tulear.

The Comoros were struck by a cyclone during Dec. 22-24: in a disaster without precedent, on the islands of Anjouan and Mohéli 500 people were killed and 40,000 rendered homeless; 500,000 coconut trees (half the total number) were uprooted and the vanilla plantations destroyed.

Agriculture. Main crops (1949, '000 metric tons): rice 750·4; maize 61·1; cassava 897·3; sweet potatoes 240·7; taros 129; potatoes 55·7; bananas 155; sugar cane 298·2; coffee 29·3. Livestock (1949, '000 head): cattle 5,646; pigs 415·7; sheep 297·8; goats 237·5; horses 2·7; mules 7.

Mineral Production. (1949, metric tons) graphite 9,140; mica 939; corundum 6·8; optical quartz 6·2. Precious stones (kg.): 445,514 including garnets 418,011 and beryls 27,061. Gold 51·7 kg.

Foreign Trade. (1949, Fr.C.F.A. million) imports 11,789·4; exports 7,369·5.

Transport and Communications. Railways (1948): 859 km. Roads (1948): 26,618 km. Motor vehicles licensed (1948): 6,087, commercial 3,990. Ships entered (1949, all ports) 5,590; cargo ('000 metric tons, 1948; 1949, six months, in brackets): unloaded 439·8 (176·3), loaded 244·9 (136·3). Air transport (1950, six months): aircraft landed, including internal flights, 24,069 (as against 18,927 during the corresponding period of 1949). Telephone subscribers (1949): 5,072.

Finance. Budget (1949 actual) balanced at Fr.C.F.A. 4,412·9 million. Franc C.F.A. (Colonies Françaises d'Afrique) = metropolitan Fr. 2.

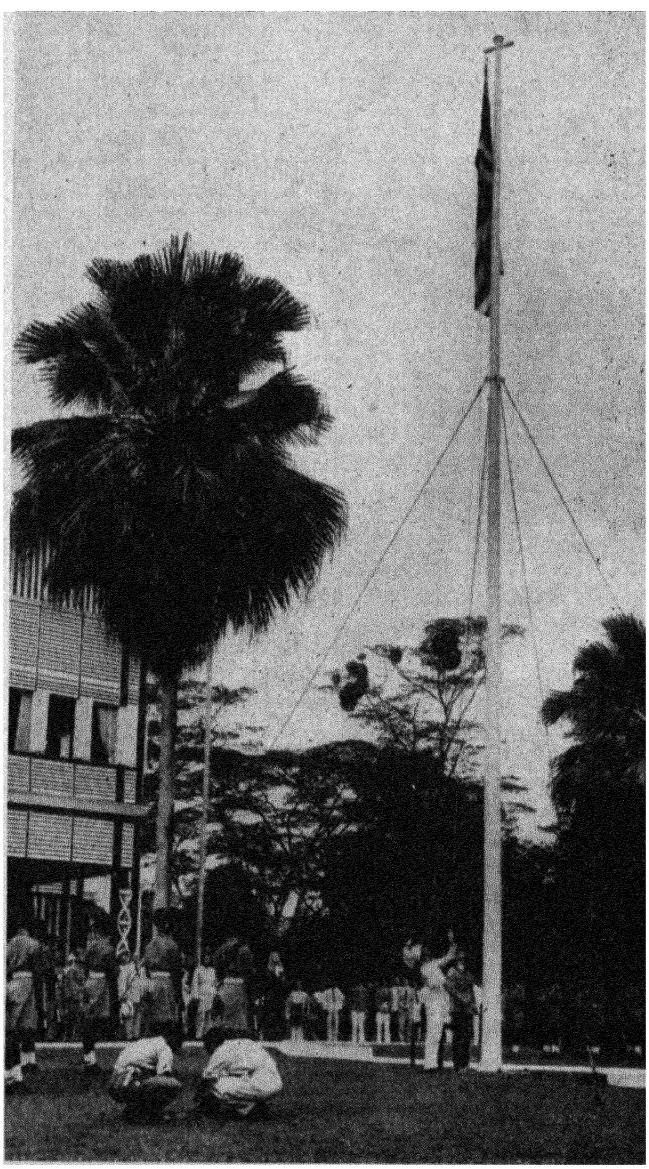
(C. A. J.)

MAGAZINES: *see* NEWSPAPERS AND MAGAZINES.

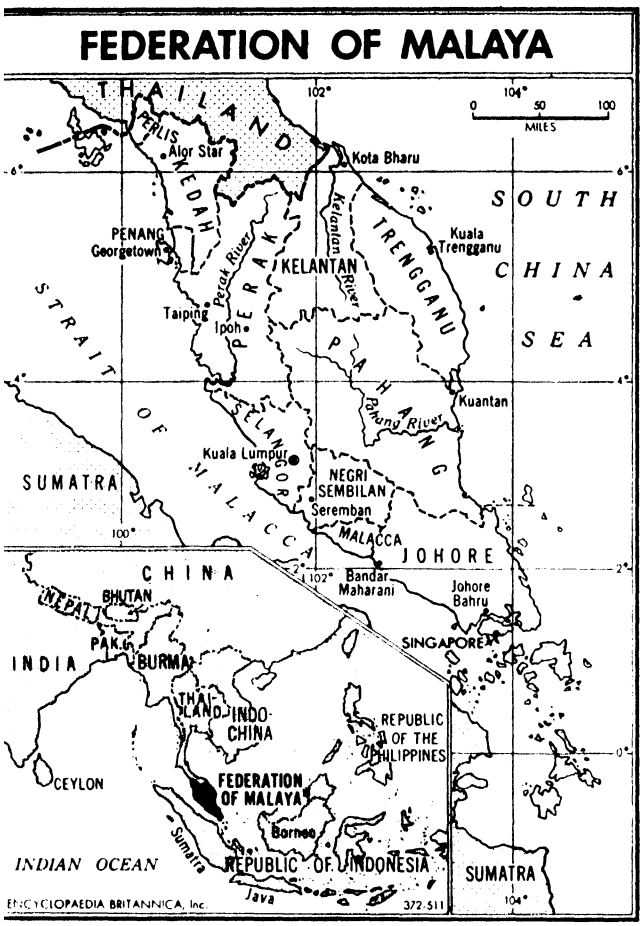
MAIZE: *see* GRAIN CROPS.

MALAN, DANIEL FRANÇOIS, South African statesman (b. Riebeek West, Cape Province, May 22, 1874), was educated at Victoria college, Stellenbosch, and at the University of Utrecht, Netherlands, where he obtained the degree of doctor of theology. He returned to South Africa as a minister of the Reformed Church, but in 1915 became editor of the paper *Die Burger* and shortly afterwards chairman of the newly formed Nationalist party in the Cape. He was elected to the House of Assembly in 1917 and from 1924-33 was minister of the interior, health and education. At the outbreak of World War II he supported General James Hertzog's policy of neutrality, and on the general's death in 1942 became the opposition leader. In the general election of May 1948 the Nationalist party won 70 seats against 65 for the United party led by Jan C. Smuts. Malan formed a government on June 3, himself taking the offices of prime minister and minister for external affairs. In April 1949 he attended the Commonwealth prime ministers' conference in London. In the first half of 1950 his government obtained parliamentary approval for its race segregation measures and for outlawing the Communist party in the Union. Malan addressed four meetings in South-West Africa during the first parliamentary elections there for seats in the Union parliament. On Nov. 7 he underwent a successful operation in Pretoria and during his illness N. C. Havenga led the government. He was able to return to his home on Nov. 21. In Oct. 1950 Malan and Havenga, leader of the Afrikaaner party, reached an agreement on native representation in Parliament.

MALAYA, FEDERATION OF. The Federation of Malaya is a British dependency consisting of the settlements of Malacca and Penang and the protected states of Johore, Kedah, Kelantan, Negri Sembilan, Pahang, Perak, Perlis, Selangor and Trengganu. Area: 50,850 sq.mi. Pop.: (1947 census) 4,908,086, including 2,427,834 Malays, 1,884,534 Chinese (38·4%) and 530,638 Indians; (mid-1949 est.) 5,159,000. Religion: Malays are Moslem; Indians mainly Hindu with some Moslem; Chinese practise Buddhism, Confucianism and Taoism; an appreciable number of Asians are Christian. Chief towns (pop. 1947 census): Kuala Lumpur (federal cap., 175,961): George Town, Penang (189,068); Ipoh (80,894); Malacca (54,507); Taiping (41,361). Administration : high commissioner ; federal



The new flag of the federation of Malaya being raised by the high commissioner, Sir Henry Gurney, in May 1950, in the presence of the secretary of state for the colonies, James Griffiths.



xecutive council; federal Legislative Council with unofficial ıajority; each state or settlement has its own council with pecial responsibilities in education; matters affecting the Ioslem religion and Malay custom are controlled by the ultans. High commissioner, Sir Henry Gurney; commis-ioner general for the United Kingdom in southeast Asia who exercises general supervisory authority), Malcolm IacDonald (*q.v.*).

History. The struggle against the Communist terrorists ıperating from the jungle, about 95% of whom were Chinese, ontinued inconclusively in 1950. Up to the end of October ,487 terrorists had been killed and 600 wounded; 530 suspects ıad been arrested of whom 130 had been sentenced to death nd 136 imprisoned. On the other side 494 regular, special nd auxiliary police, mostly Malay, had been killed and 541 vounded; 1,180 civilians had been killed (including 788 Chinese and 53 Europeans) and 700 wounded; 343 civilians vere missing. "Incidents" ranging from ambushes and ırson to the cutting of telephone wires continued at a monthly ate of about 450.

On June 7 Lieut. General Sir Harold Briggs, the newly ıppointed director of operations, whose task was to co-ordinate military, police and administrative measures against he terrorists, put into operation what became known as the Briggs plan. Its chief feature was an attempt to cut the ungle terrorists off from the supplies they had been obtaining rom the population. In particular the resettlement and egrouping of scattered Chinese "squatter" cultivators, vho had been an easy prey for terrorist raiding-parties, went orward rapidly with co-operation and financial support rom the Malayan Chinese association. Of approximately 5,000 "squatter" families involved about 14,000 had by October been resettled within reach of police protection. But there remained rubber smallholders, pineapple growers and oil-palm cultivators many of whom were widely scattered and, therefore, potential sources of supply for the terrorists. About 22,000 troops, British, Gurkha and Malay, with air support, were deployed against the terrorists as well as 130,000 regular and auxiliary police and special constables. Nevertheless in September the number of casualties and "incidents" inflicted by the terrorists were no less than in the months immediately preceding the putting into operation of the Briggs plan.

Operations against the terrorists continued to be a severe financial drain on the federation and the cost of the campaign in 1950 was about 158 million Straits dollars which represented over one-third of the estimated revenue. In spite of this a six-year plan of economic and social development was inaugurated by the government in July. Besides providing for expanded production by, for example, jungle clearance and irrigation and by improved power supply and communications, the plan envisaged the opening of about 200 primary schools, several teachers' training colleges and 25 health centres. Its proclaimed aim was to counteract Communist propaganda by raising living standards in Malaya. An important adjunct to the six-year plan was the new Rural and Industrial Development authority which started work in August under the chairmanship of the Malay leader, Dato Onn, with the task of improving conditions in the countryside by stimulating and financing small cultivator co-operatives, village arts and crafts and rural education.

The Communities Liaison committee (consisting of 6 Malays, 6 Chinese, 1 Indian, 1 Eurasian, 1 European and a Ceylonese chairman) took further steps towards creating the basis for a non-communal Malayan nation. On April 18 they agreed that organizations for improving the social and economic well-being of the Malays should be set up, that immigration should be reduced to a minimum and that a new basis should be established for Malayan federal citizedship more favourable to non-Malays than the federal agreement of 1948 had been. They also recommended that the Malay states enact their own nationality laws. On Aug. 27 the United Malay National organization (U.M.N.O.) endorsed these proposals with important modifications, the chief of which was the stipulation that applicants for citizenship or nationality must pass a language test and must renounce allegiance to any other nation. Before the proposals were approved by U.M.N.O., the more favourable terms they offered to the Chinese caused a crisis which resulted in the resignation of Dato Onn, the chairman, who was, however, subsequently re-elected.

The Legislative Council, in pursuance of the United Kingdom government's policy of preparing Malaya for self-government, enacted on Sept. 28 a law providing for municipal elections after Jan. 1, 1951. A special committee of the Johore state council recommended a scheme for the election of a majority of the state councillors on a non-communal basis, and on Sept. 20 the federal government put forward a proposal under which some unofficial members of the federal Legislative Council would take over responsibility for groups of government departments and assume, in effect, the status of salaried ministers.

During 1950, especially after the outbreak of the war in Korea, and mainly as a result of United States stock-piling, the price of rubber rose steeply from 50 cents a lb. in January to 2 dollars 35 cents a lb. in November. Despite terrorist activity against the rubber estates the average monthly rubber production in Malaya (569,988 tons for Jan.-Oct.) was higher than in 1949. On Dec. 4 the federation government announced that a new sliding scale export duty on rubber would operate from Jan. 1, 1951, instead of the existing 5% *ad valorem* duty. The new duties rose from 2½% *ad valorem* when the price of rubber was 50 cents a lb.

to 31% when the price was $2 a lb. Part of the proceeds was to go into replanting.

On April 30 the rubber workers secured improved wage-rates based on an increase of 12% when the price of rubber was over 47 cents a lb. and of 24% if it exceeded 70 cents. On Oct. 21 the rubber estate employers refused a further demand of the All-Malayan Rubber Workers' union for a minimum wage of three dollars a day.

The secretary of state for the colonies, James Griffiths, and the secretary of state for war, John Strachey, visited Malaya from May 24 to June 8. In March the U.S. Griffin mission on technical aid visited the federation and from Aug. 7 to 16 the U.S. mission on military aid under John F. Melby and Major General G. B. Erskine was in Malaya. Another important visiting delegation was that from the International Confederation of Free Trade unions between Aug. 12 and 20 which made contact with the 5-month-old Malayan Trades Union council.

From Sept. 18 to Oct. 22 Dato Onn, chairman of the U.M.N.O., visited London as a member of the Malayan delegation to the Commonwealth conference on aid to southeast Asia. On Sept. 22, in a news agency interview, he criticized the British government for insufficient confidence in the people of Malaya and proposed the formation of a " national army " of 50,000.

Education. Government maintained, aided and private schools: English 231 (90,727 pupils), Malay 1,531 (238,592), Chinese 1,338 (202,769), Indian 889 (38,743). University of Malaya (*see* SINGAPORE).

Agriculture. Production of main crops (1949): rubber 670,257 tons, rice 307,180 tons, copra 122,937 tons, coconut oil 63,698 tons, coconut cake 43,300 tons, palm oil 50,561 tons, palm kernels 10,459 tons.

Mining. Production (1949): tin-in-ore 54,910 tons, coal 386,898 tons, gold 13,617 troy ounces, iron ore 8,390 tons.

Foreign Trade. Imports: (1949) $535 million, (Jan.-June 1950) $311 million. Exports: (1949) $624 million, (Jan.-June 1950) $452 million. Main sources of imports (1949): United Kingdom $170 million, Burma $69 million, Indonesia $62 million, Thailand (Siam) $61 million. Main destination of exports (1949): United States $220 million, United Kingdom $91 million, India $29 million, Russia $29 million.

Finance. Currency: Malayan dollar (one Malayan dollar=2*s*.4*d*.). Budget: (1949 revised est.) revenue $371,248,235, expenditure $288,632,891; (1950 est.) revenue $330,859,022, expenditure $303,951,292.

(D. A. SN.)

MALIK, YAKOV ALEKSANDROVICH, Soviet **diplomat** (b. Kharkov, Ukraine, 1906). After graduating from the Soviet Institute of Foreign Affairs he was appointed assistant chief of the press section at the People's Commissariat of Foreign Affairs in 1937. In 1939 he was sent as counsellor of the Soviet embassy in Tokyo where he became ambassador on May 20, 1942. From Jan. 1946 he was political adviser to General Kuzma N. Derevyanko on the Allied Council for Japan, but on Aug. 24, 1946 was appointed deputy minister of foreign affairs in charge of the far eastern department. In May 1948 he succeeded Andrey A. Gromyko as chief Soviet representative to the United Nations. On Aug. 1, 1950, after a seven-month's absence from the Security council in protest at the presence of the Chinese Nationalist delegate, Malik returned to the council, and was chairman during that month.

MALTA. British colony, a group of Mediterranean islands about 58 mi. S. of Sicily; only two, Malta and Gozo, are of importance. Area: Malta 94·9 sq.mi., Gozo 25·9 sq.mi. Pop.: (Malta and Gozo, 1948 census) 306,996, of whom 27,680 on Gozo. Language: Maltese; English and Italian is also spoken. Religion: almost entirely Roman Catholic. Principal towns: Valletta (cap., 18,666), Sliema (24,294), Hamrun (17,124), Birkirkara (16,070). Administration (dyarchical): defence and external relations were responsibility of governor and nominated council of 2 *ex officio* and 3 armed services members; in domestic matters the Maltese have complete self-government, the governor acting on the advice of an executive council of 9 ministers, members of and responsible to an elected Legislative Assembly of 40 members; privy council consisting of the nominated and executive councils sitting together on matters affecting both. Governor, Sir Gerald Creasy; prime ministers in 1950, Paul Boffa, Enrico Mizzi (from Sept. 26; *see* OBITUARIES) and G. Borg Olivier (from Dec. 20).

History. The outcome of the negotiations between the governments of Malta and the United Kingdom in 1949 was that the former agreed to a suggestion for an enquiry into the long-term problems of the island's economy and asked for the appointment of an expert. Sir George Schuster accepted the invitation and went to Malta in April 1950. In May he advised the government of Malta that the island could not



Princess Elizabeth, Duchess of Edinburgh, inspecting the Royal Malta Artillery during a ceremonial parade on April 3, 1950, to mark the 8th anniversary of King George's assumption of the title of colonel in chief of the regiment.

hope at that time to pay for the maintenance of its essential services and shortly afterwards the British government agreed in principle to provide a grant of £1,500,000 from colonial development funds over the next five years to strengthen the economic foundations of the island and to make good arrears of necessary capital expenditure. In August it was announced that $2,300,000 of Marshall aid funds would be made available to meet almost half the cost of a new electric power plant. In June Dr. Boffa's government was defeated in the Legislative Assembly. At the resultant general election Dr. Mizzi's Nationalist Party won 12 seats, Dr. Boffa's Labour group 11, Malta Labour Party 11, Constitutionals 4, Democratic Action Party 1, independent 1. Dr. Mizzi assumed office as prime minister with a minority government on Sept. 26. When the new assembly opened on Oct. 16 the speech from the throne contained a warning that the deficit for the current year would probably rise from £187,000 to £475,000 and that reserves would dwindle to £900,000. Continued efforts to foster emigration resulted in 5,178 persons' leaving by Aug. 31, as compared with 5,318 during the whole of 1949, but 4,811 babies were born in the eight months and the population was only reduced by 367. Princess Elizabeth was resident in the island in the spring in order to be with the Duke of Edinburgh who was on service with the Mediterranean fleet. Dr. Mizzi died on Dec. 20.

Finance and Trade. Currency: pound sterling. Budget (1949-50 est.): revenue £5,380,962; expenditure £5,586,683. Foreign trade (1949): imports £15,311,753; exports, incl. re-exports, £1,037,501. (K. G. B.)

MAN, ISLE OF. Island in the Irish sea, part of the United Kingdom but administered separately by a lieutenant governor, an appointed Legislative Council, and the House of Keys of 24 elected members. Both branches of the legislature sitting together as one body, but voting separately, are known as the Tynwald court. Area: 220·7 sq.mi. Pop. (1939 est.): 50,829. Capital: Douglas (pop., 20,012). Lieut. governor, Air Vice Marshal Sir Geoffrey Bromet.

History. The legislature spent a busy year in 1950: 28 acts were promulgated at the July Tynwald court. Electric power and light and central water supplies were extended to nine-tenths of the population. The Board of Agriculture embarked upon a scheme to provide the needs of the island with none but tuberculin-tested milk, and one-seventh of the milking herds were attested by the end of the year. The artificial insemination service was extended to a quarter of the milking cows. A fresh-water fish hatchery for salmon and trout was completed at Kirk Michael. The government scheme for re-housing, including the provision of loans for building houses by private enterprise, was successful. Douglas harbour was fitted with a complete radar control apparatus and the airport was equipped with a bad-weather instrument landing apparatus.

During the year nearly half a million visitors arrived by sea and air. A board of Tynwald was set up to control crown lands, mines and forests. The 1949 Education act brought insular education into line with education in England. Excavations on a promontory at Port Grenaugh brought to light what was believed to be a fortified farmstead of the late Viking period.

Education. Schools (1949-50): primary 36, pupils 4,200; secondary 6, pupils 2,999; domestic science college 1, pupils 205; school of technology 1, students 270; King William's college, students 330.

Agriculture. Livestock (1949): horses 1,874; cattle 24,976; sheep 72,094; poultry 183,275; pigs 3,890; tractors 720; milking machines 120.

Finance. Budget (1949-50): revenue £2,598.519; expenditure £2,831,880. National debt (March 31, 1950) £1,240,000.

See R. H. Kinvig, *History of the Isle of Man* (Liverpool, 1950); E. H. Stenning, *The Isle of Man* (London 1950). (E. H. S.)

MAO TSE-TUNG, Chinese Communist leader (b. Shaoshan, Hunan, 1893), attended the Hunan Normal school at Changsha (1912-18) and became a teacher. He joined the Chinese Communist party (Kungchantang or K.C.T.) in Oct. 1921. During the period of Kuomintang-Communist collaboration he worked in the Shanghai headquarters of the Kuomintang. After the breakdown of this collaboration in 1927, he started to propagate communism among the peasants. In 1931 he became the head of the Communist republic in Kiangsi, in southern China, but in 1934-35 took part in the " long march " to the north and organized the Communist government at Yenan, in Shensi, nearer to the Mongolian People's republic. In 1936 he was elected chairman of the central committee of the K.C.T. After the Japanese aggression in 1937 Mao's government promised to co-operate with Chiang Kai-shek's national government against the invader, but friction soon developed between the two armies, which after 1941 operated independently. When Japan capitulated Chiang invited Mao to Chungking in the hope of achieving unity, but to no practical effect. In the spring of 1946 the Chinese Communist armies started a general offensive towards Manchuria. By March 1947 the break between the two Chinas was completed. During 1949 all continental China fell into Communist hands. On Oct. 1 Mao became chairman of the central people's government council of the Chinese republic—an office similar to that of the president of the republic. On Dec. 16 he arrived in Moscow for the first time and was received on the same day by Joseph Stalin. The Chinese-Soviet treaty of alliance was signed in Moscow on Feb. 14, 1950, and three days later Mao and Chou En-lai (*q.v.*) left the Soviet capital, returning to China. In a report presented to the central committee of the K.C.T. on June 6, Mao referred to the problems confronting the country and put forward an eight-point programme for their solution. Addressing the national committee of the People's Political Consultative conference on June 24, he said that the nationalization of industry and the socialization of agriculture were matters for the distant future, when the practical realization of socialism would have been endorsed by the entire nation.

MARGARET ROSE, PRINCESS (b. Glamis castle, Angus, Aug. 21, 1930), the younger daughter of King George VI (*q.v.*) and Queen Elizabeth. For her earlier career see *Britannica Book of the Year 1950.* On Jan. 10, 1950, the *London Gazette* announced the appointment of Princess Margaret as colonel in chief, Highland Light Infantry of Canada. On Feb. 5 she attended a holiday camp reunion service at St. Paul's cathedral, London, and at the end of the month visited Dr. Barnardo's nursing home at Kelvedon, Essex. During a short tour of Lancashire at the end of March, she laid the foundation stone of the new Free Trade hall in Manchester, opened a " King George's field " at Gorton and visited Salford; later she went to St. Helen's, Leigh and Wigan, and opened the Warrington Boys' club. In April, the princess visited Newcastle-upon-Tyne and launched the tanker " Velutina." In May she inspected the Girl Guide training ship " Foudroyant " at Portsmouth and attended the Empire Youth Sunday service in Westminster abbey. On May 31 she distributed prizes at St. Edmund's school, Canterbury, and was received by the dean of Canterbury, Dr. Hewlett Johnson (*q.v.*), at the cathedral. In June she visited a new housing estate at Ramsgate, gave her name to its main drive and unveiled a book of remembrance at Ramsgate hospital; she was also guest of honour at a reception of Rhodes scholars and dominion students at Grocers' hall, London, opened Bethnal Green Youth week and visited the Sir Beachcroft Towse Sunshine Home Nursery School for Blind Children, East Grinstead, Sussex. In October she visited Balliol college, Oxford. In November she opened the Amwell Court housing estate,



Princess Margaret, in the uniform of commodore of the Sea Rangers, leaving the training ship "Foudroyant" at Portsmouth, May 1950. Preceding her is Admiral of the Fleet Sir Algernon Willis.

Stoke Newington, London. In December she paid a short visit to Malta where she joined Princess Elizabeth and the Duke of Edinburgh.

MARIANAS ISLANDS: *see* TRUST TERRITORIES.

MARINE BIOLOGY. Experiments on the ecology of shore organisms by clearing strips of rocky foreshore of all plants and animals showed that there is a primary settlement of attached diatoms in spring. This settlement is followed by the appearance of rapidly growing green seaweeds, which become later dominated by the brown weeds. Observations on the biology of the common fucoid weeds established their seasonal growth and their range in variation in form and chemical composition: there is extensive depopulation of these plants by wave action in rough weather.

Research indicated that, as reported in 1949 for the oyster, the populating of a substratum by the acorn-barnacle may be influenced by the presence of other individuals that have recently settled. This tendency to gregariousness was shown for the Australian acorn barnacle, *Eliminius modestus*, which had become established in British waters, presumably having been imported on the hull of a ship. The species had become a serious competitor for settling space in oyster beds. Experiments with glass cloth indicated that calcareous secreting organisms, such as acorn barnacles and tube-building worms, are unable to settle on a surface roughened by fibrous ends, but the hybroid *Tubularia* can, an indication of the importance of the type of surface for success in settlement.

A detailed study of the distribution of a burrowing bivalve mollusc, *Tellina*, showed that the individuals of a population, provided that their number is limited, may live in restricted territories whose area is governed by the lengths of their syphons, which search the surface of the substratum to filter off the food.

Much attention continued to be paid to the problem of the productivity of the sea. Elaboration of methods for estimating the total phosphorus in the water made it possible to show that some water masses may be distinguished at any time of year by the total phosphorus content, and that this content bears some relation to the total production of living matter. With a view to establishing constants to help in estimating the productivity of the sea information was being obtained on the respiration, metabolism, moulting and feeding of planktonic copepods. These minute crustacea occur in enormous numbers in the sea and form the chief food of most young fishes and of many pelagic fish such as herring, sardines and mackerel.

The occurrence of "red water" in the sea, to which repeated references continued to be made, began to arouse considerable interest, and research was conducted on the physiology of the microscopic plankton organisms chiefly responsible. These are often small plant-like unicellular organisms, known as dinoflagellates, whose presence in great quantities is poisonous to fish and other animals; mass deaths of fish consequently occur.

A study of the distribution of the common octopus appeared to throw light on the causes of periodic plagues of this cephalopod mollusc: a succession of warm years may ensure improved breeding conditions at the northern limit of the range of this inhabitant of the warmer waters. Thus,



Some of the 147 whales which came ashore at Thornton Loch, 4 mi. south of Dunbar, East Lothian, on May 13, 1950. Another 15 struggled back into deep water.

there had been a great increase in the octopus population along the north coasts of France, and this was reflected in increased numbers of octopuses on the coasts of southern England.

The octopus has the most highly developed nervous system known in invertebrate animals and experiments were in progress which used them to study the processes of learning and behaviour. Such cephalopods, and especially the squid, possess giant nerve fibres which formed the subject of widespread research on the fundamental activities of nervous tissue. Much attention was also paid to physiological studies on the activities of the whole animal. Information was obtained on the various rhythmic activities and movements of tube-building worms, and on their reactions to light. It was shown that the compound eye of the archaic king-crab, *Limulus*, is susceptible to polarized light, a matter of some interest in view of discoveries of similar sensitivity shown by the eyes of honey bees.

Many interesting instances of commensalism between marine animals are known; typical is the occurrence of an anemone on the shell of a hermit crab, and a polychaete worm inside the shell. Little was known on how the parasitic commensal finds its specific host. Experiments with worms commensal with starfish showed that one species of starfish gives off into the surrounding water a chemical factor attractive to its own special commensal worm, which is able to distinguish water in which the host has lived; and that commensals of other species of starfish are not attracted.

After earlier investigations with oysters it became possible, by successively raising the temperature of the water, to condition the clam to spawn in seasons other than that in which it is natural for the species to spawn. Thus clams can be made to spawn in winter and spring, and a constant supply of larval stages can be obtained for experimental purposes. (*See* also FISHERIES; ZOOLOGY.)

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MARKET GARDENING. In the western world, and particularly in Europe, the confidence of small-scale market gardeners that they could continue profitably to produce at 1947-49 levels of activity waned during the year. Germany re-entered the scene as an importing nation and helped to ease the position, but many specialist groups of horticulturalists suffered losses from falling prices in choked markets. Early markets continued to be remunerative, but mid-season supplies were excessive. Tomatoes was one crop that seemed to have been over-produced.

Growers in Great Britain faced 1950 with their staple vegetable crops depleted and backward. Prices moved up, but the volume of the crop was not great enough to give full compensation. Produce of inferior quality was sent to the market, and the combination of high prices and poor quality produced a degree of consumer resistance. The supply position tended to over-correct itself later, for frequent rains throughout the growing season brought on an exceptional crop. The June acreage of vegetables, at 513,000, was 17,000 ac. less than in 1949, and was the lowest total since 1945.

Greater soft fruit acreages were recorded for all categories, with a total of 50,600 ac. for England and Wales, against 48,400 in 1949 and 47,200 in 1939. Strawberries, with 21,100 ac., and blackcurrants, with 16,400 ac., were of primary importance. In spite of the larger acreages, crops were generally lighter than in 1949. Final estimates of commercial production were (in '000 English tons): strawberries 39·1, raspberries 3·8, black currants 16·5, red and white currants 2, and gooseberries 8·3.

The annual production of tomatoes in the United Kingdom increased to about 150,000 English tons, twice the 1938 total, and imported supplies added 220,000 tons to total available supplies. Tomatoes were the main glasshouse crop and accounted for three-quarters of the summer use. Commercial glasshouse acreage increased from 4,172 in 1949 to 4,316, heated houses increasing in greater proportion than cold houses. The flower section of the horticultural industry, which covered 15%-20% more ground than in 1949, met generally lower prices.

In the United States, at the turn of the year, stocks of many truck crops were above average, after the high production in 1949, the producers' price expectations were based somewhat lower. Production of six leading crops for summer use, at 2·7 million tons of 2,000 lb., was above 1949 except for tomatoes. Among small fruits, both the acreage and the production of strawberries increased, production to 10·2 million crates (of 24 qt. each), 15% up on 1949. February-March marketings from Florida were up by as much as 84%. The commercial cranberry crop totalled 969 million lb., of which some 57% was for canning. (*See* also FRUIT; HORTICULTURE; VEGETABLES.) (R. R. W. F.)

MARQUESAS: *see* PACIFIC ISLANDS, FRENCH.

MARRIAGE AND DIVORCE. Throughout early 1950 marriage and divorce rates declined slightly in most countries. Part of the decline in marriage rates no doubt resulted from the rising cost of living; another factor was the unprecedented number of marriages and divorces among younger people which had swollen the figures in the years immediately after World War II. There was a spurt in marriages in some countries during the second half of 1950. From statistics for several countries it appeared that fully two-thirds of children affected by divorce were under 10 years of age.

Great Britain. One of the teachers' organizations in Britain, the National Association of Schoolmasters, at their conference in April adopted a resolution stating their conviction that education in sex was " the natural and normal duty and the responsibility of the parents and should not be delegated to the teacher." In the field of social medicine, an increase of 32% in " physical incapacity " was noted among younger women and 41% among older women compared to 8% and 9% respectively for younger and older men. The registrar general reported about 42,400 illegitimate births during 1948 and approximately 61,000 births within 8½ months after the parents' wedding date. Together these constituted about one-eighth of all births. The Royal College of Obstetricians and Gynaecologists after an investigation of birth-control practices found that, of every three couples who marry, one uses contraception from the wedding, and a second does so within five years.

A special committee of the Home Office proposed that parliament, in addition to present support, should provide other funds to the National Marriage Guidance council, the Catholic Marriage Advisory council and the Family Welfare association if they would unite in a plan of special training for marriage counsellors. On the request of the War Office, the National Marriage Guidance council continued its four-day courses on " Successful Marriage and Family Life " for men and women in the armed forces.

Canada. The divorce rate continued to decline except in Nova Scotia and Quebec; the highest rate was in British Columbia, with approximately twice the dominion average. Parliament refused to broaden the divorce laws; the only ground for divorce remained adultery, except in Nova Scotia where cruelty was also recognized. As in Quebec, Newfoundland citizens might now petition the federal government for a divorce granted only on the approval of parliament.

United States. With a marriage rate estimated at 11·2 per 1,000 population a provisional total of 1,660,000 marriages was expected for 1950—an increase of nearly 5% over the preliminary total of 1,585,440 marriages for 1949 but a decrease of more than 8% from the final total of 1,811,155 marriages for 1948. The number of divorces including annulments probably would not exceed 380,000, decreases respectively of 2% and 7% from the 386,000 divorces of 1949 and 408,000 in 1948. Among the findings from various studies were that 20% of persons divorced in 1948 and 18% of those married but with their spouse absent in 1948 had been married more than once, compared to 13% of the widowed, or those with spouses, who had been married more than once; that about three-fourths of divorced persons remarried within five years, usually with other divorced persons; that only 2% of U.S. college students were taking courses in preparation for marriage; that 60% of all women in *Who's Who in America* had been married at least once and 14% more than once; that, as late as 1949, approximately 2,156,000 married couples were living in hotels, in furnished rooms or with relatives; and that 6% of men and 3% of women college students familiar with A. C. Kinsey's report, *Sexual Behaviour in the Human Male*, reported that their conduct and behaviour had been influenced by the findings.

Other Countries. In Belgium the divorce rate was steadily rising with grounds largely confined to cruelty and adultery. In Finland nearly a dozen marriage guidance clinics were being maintained with more than half the clients coming only for information on contraceptives. The Family Allowance administration in France was lending to large families up to 80% of the cost for labour-saving machinery in the home. A surplus of 3 million women was reported in Germany. From the Netherlands came the report that 13% of Roman Catholics contracted mixed marriages from which only one-third of the children were reared as Catholics. In Italy, where the birth rate continued to decline, the Senate approved a new law intended to halt easy marriage annulments. Rota, the Vatican tribunal adjudicating on the validity of marriages, reported that during 1936-49 it had granted 479 requests to nullify marriages and had rejected 686 cases.

In China the Communist government outlawed plural wives, concubines, child marriages and betrothals and interference with the right of a widow to remarry, and provided that marriage and divorce could be legalized by mutual consent with both parties held responsible for the welfare of any children. In Japan, rates of marriage, birth and divorce continued to be high; because of the spread of abortions, plans were under way to provide information on contraception to the poor. In Egypt, the rector of the University of el-Azhar, the Moslem university in Cairo, declared that contraception was not contrary to the doctrines of Islam. (*See* also VITAL STATISTICS.)

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MARSHALL, GEORGE CATLETT, U.S statesman (b. Uniontown, Pennsylvania, Dec. 31, 1880), studied at the Virginia Military institute, Lexington, Virginia, and was commissioned a second lieutenant in 1901. He advanced through the various officer ranks to general of the army in 1944. He was made chief of staff on Sept. 1, 1939, the day Germany's invasion of Poland launched World War II, and he supervised the U.S. army effort throughout that war. Marshall resigned as chief of staff in Nov. 1945. Later that month, he was appointed ambassador to China, where he spent 13 months in an unsuccessful effort to mediate in the Chinese civil war. On Jan. 7, 1947, President Truman announced Marshall's appointment as secretary of state to succeed James F. Byrnes. Several months later, Marshall proposed a plan for the reconstruction of Europe with U.S. aid. This proposal, commonly called the Marshall plan, was translated into the European Recovery programme, enacted into law in April 1948. It played a significant part in the economic rehabilitation of western Europe, particularly Great Britain. Marshall resigned from the cabinet in Jan. 1949 and in September was appointed president of the American Red Cross. A year later President Truman appointed him secretary of defence. Special legislation was passed by congress to permit him to take the post, since the National Security act of 1947 prohibited an officer who had been on the active list within the preceding ten years from becoming defence secretary. His appointment was confirmed on Sept. 20, 1950, and he was sworn on Sept. 21. Marshall urged the passage of a universal military training law, stating that war in Korea had demonstrated the danger to the U.S. of its lack of a reserve of trained manpower.

MARSHALL ISLANDS: *see* TRUST TERRITORIES.

MARSHALL PLAN: *see* EUROPEAN RECOVERY PROGRAMME.

MARTINIQUE. Former French island colony situated in the Lesser Antilles the status of which was changed in 1946 to that of an overseas *département*. Area: 427 sq.mi. Pop.: (1936 census) 246,712; (1946 census) 261,595. The inhabitants are mainly coloured (Negro or mixed), speak a French *patois* and are Roman Catholic. The capital is Fort-de-France (pop., 1946 census, 66,006). Prefect, Christian Laigret.

History. The sugar quota from 1950 production reserved for export was fixed at 36,000 metric tons out of 42,000 tons produced, that is, double the figure for the previous year. This increase was due not to a large harvest but to the decline in rum-distilling caused by export difficulties. From February the island received flour stocks from the mother country and no longer from the United States. It was possible to open an airport at Lamentin on May 15, though it had been feared that work might be interrupted by lack of credit. There was a great drive to develop tourism to Martinique. In June the 10th session of the Caribbean commission (*q.v.*) was held at Fort-de-France.

Agriculture. Main products ('000 metric tons, 1949; 1950 in brackets): sugar cane 419·6 (509·8); sugar 22·8 (37·1); rum, hectolitres, 184,107 (120,192).

Foreign Trade. (Million M.Fr. 1949; 1950 in brackets) imports 8,533·2 (3,532·5); exports 5,105 (1,853·3).

Transport and Communications. Ships entered (1949) 681. Cargo ('000 metric tons): unloaded 151·7; loaded 103·2.

Finance. Budget (million M.Fr.): (1949 actual) balanced at 944·2; (1950 est.) balanced at 1,385·6. (C. A. J.)

MATHEMATICS. The outstanding event of 1950 was the International Congress of Mathematics (postponed from 1940 because of World War II) held from Aug. 30 to Sept. 6 at Cambridge, Massachusetts, with Harvard university as the principal host. The attendance was more than 2,300, with about 300 representatives and delegates from more than 40 foreign countries, in addition to those from 15 American academies and learned societies. The U.S.S.R. Academy of Science sent its best wishes for the success of the congress but said it could not be represented. O. Veblen, of the Institute for Advanced Study, Princeton, was president of the congress; J. Hadamard, of the College de France, Paris, was honorary president.

In 1896 Hadamard and C. de la Valle Poussin (Belgium) independently and almost simultaneously had proved the so-called prime number theorem, using advanced mathematical analysis. How many prime numbers are there, in the long run, not exceeding a prescribed limit, say x ? The

theorem states that, asymptotically, there are x/log x, where the log is the natural logarithm; as x increases indefinitely, the implied approximation becomes uniformly sharper. A remarkable feature of this theorem was the manner of its derivation. Analysis, the mathematics of continuity, was applied to the natural primes, which are a discrete set. The relevant analysis was not elementary, in that it employed the theory of functions of a complex variable, and experts in the analytic theory of numbers had long doubted whether an elementary proof was possible. Such a proof was given, most unexpectedly, by the Norwegian, A. Selberg, of the Institute for Advanced Study. For this he was awarded one of the two Fields medals (endowed by J. C. Fields, president at the International Congress of Mathematics, Toronto, 1924).

The other Fields medal went to L. Schwartz of Nancy, France, for his development of a new branch of analysis which he called the theory of distributions. A distribution is a generalization of the classical concept of a function. The new theory had many applications to potential theory, spectral theory, partial differential equations and other departments of both pure and applied analysis. A detailed account, of which the first part appeared toward the end of 1950, was being published in French.

The congress as a whole gave an encouraging picture of mathematics in the first half of the 20th century. There were formal addresses by 22 invited speakers and more than 400 short communications on algebra and the theory of numbers, analysis, geometry and topology, probability, actuarial science, economics, mathematical physics, applied mathematics, logic and the philosophy of mathematics, history and the teaching of mathematics.

Among the conferences and symposia before and after the congress that on computing machines was of special interest. Although these machines were developed largely for military purposes, they had contributed notably to peaceful pursuits, from the theory of numbers to mathematical physics. Without mechanical aids some of the computations involved would have been humanly impossible. To mention only one instance, M. Mersenne's conjecture on primes of the form 2^p-1, where p is prime, had been tested out to p=409, far beyond what a human computer could do in a lifetime. (For the nature of the conjecture, *see* W. W. R. Ball, *Mathematical Recreations and Essays*.) (E. T. B.)

MAURITANIA: *see* FRENCH WEST AFRICA.

MAURITIUS. British colony and dependencies in the Indian ocean; dependencies, of which the largest are Rodrigues and Diego Garcia, comprise a large number of islands.

	Area (sq.mi.)	Population (1944 census)	(1949 est.)
Mauritius	720	419,185	447,503
Rodrigues	42	11,885	—
Diego Garcia	—	501	—
Other dependencies	—	1,077	—

Population of Mauritius: 57% Indian. Languages: Creole *patois*, Hindi, French and English. Religion: mainly Roman Catholic among those of European, African or mixed descent. Capital, Port Louis. Administration: governor, executive council, 3 official and 4 unofficial members; Legislative Council, 3 *ex officio*, 12 nominated unofficial and 19 elected members. Governor, Sir Hilary Blood.

History. The malaria eradication campaign was continued with very successful results, the spraying with D.D.T. of buildings in all the chief malarial areas being carried out during the rainy season. Surveys for the season up to April 1950 showed a reduction of 80·5% in the number of notified cases of malaria as compared with 1948, and a reduction of 99% in the number of mosquitoes found in the sprayed areas. On Aug. 25 the municipality of Port Louis celebrated its centenary and was granted a new elective constitution. As a result of negotiations held in London early in the year between the minister of food and the sugar-producing countries of the Commonwealth, Mauritius now had a guaranteed market for most of its output until 1957. The 1950 crop was 409,764 tons in spite of the fact that more than half the mills came out on strike in the middle of the harvest.

Finance and Trade. Currency: Mauritius rupee (Re. 1=1*s.* 6*d.*). Budget (1950-51 est.): revenue Rs. 54,683,152; expenditure Rs. 52,617,370. Foreign trade (1949): imports Rs. 153,221,654; exports, incl. re-exports Rs. 170,229,668. Principal exports: sugar, arrowroot, copra. (K. G. B.)

MEAT. World meat production in 1949 was reported during 1950 to have been about 30·5 million tons, slightly above the pre-war average. Improvement in the world situation was expected to continue as output in Europe was restored. The quantity of meat entering international trade in 1949 increased by 3%, reversing the downward movement begun in 1947. World beef exports, which increased nearly 50% in 1946-47, were not maintained in 1948 but recovered in 1949. Mutton and lamb exports fell substantially in 1948 but rose slightly in 1949, and pig meat exports, which fell heavily from 1944 to 1948, also showed a small increase. Canned meat exports, substantially reduced in 1947, declined further in 1948-49.

Britain was by far the largest importer of meat and variations in her imports accounted to a large extent for changes in world trade figures. Australia and New Zealand had not been able, by the end of 1950, to fill the gap left by the short-fall in Argentine beef supplies. The greater quantities of bacon coming from European countries offset the reduction in imports from Canada. United Kingdom imports (including canned meat) in 1950 were 0·7% below 1949. Of the aggregate of 871,050 tons, beef weighed 347,150 tons, canned beef 67,100 tons, mutton and lamb 410,350 tons and pork 30,600 tons. Bacon weighed 243,650 tons. In addition 137,298 fat cattle, 214,885 bulls and bullocks and 85,104 cows and calves were imported.

The international trade in meat was largely governed by contracts and agreements between governments and quasi-official organizations. The most important British agreements were those with Australia, New Zealand, Argentina and Ireland for all types of meat and with Denmark, the Netherlands and Poland for bacon, and a series made annually such as that for bacon from Canada.

The production of beef for export in New Zealand during 1949-50 recovered from the low level of 1948-49, rising by 5%. Mutton and lamb production for export was 3% greater than in the preceding season. In Australia beef and veal production in the first four months of the 1950-51 season showed an increase of 2%, whereas output of mutton and lamb was 27% less. The Canadian livestock census for 1950 showed cattle numbers still falling, but the total of 9 million was still 6% above prewar. Exports of Canadian cattle in the nine months to Sept. 1950, almost entirely to the U.S., were 35% greater than in the corresponding period of 1949. For the sixth year in succession sheep numbers in Canada were smaller; the total for 1950, 2,015,000 was 3% less than 1949 and 41% below 1938. Pig meat production in Canada in the first three-quarters of 1950, 229,500 tons, was 18% greater than the comparable period of 1949. Exports were 30,100 tons compared with 17,400 tons in the same period in 1949. Total slaughterings of cattle in Argentina in 1949 (8·9 million) were 4% more than the previous year, but domestic consumption (7·1 million) increased by 6%. The number of cattle slaughtered for export had steadily declined since 1947 and in 1949 was 1·6 million. The cattle population of Holland

rose from 2,517,000 in 1949 to 3,671,000 in 1950, and pigs increased from 1,795,000 to 2,773,000. Exports of live cattle from Denmark during the Jan.-Sept. 1950 period were more than four times as great as in the same period of 1949; Germany took 80% of the total of 154,316.

Livestock in Britain increased; the 10·5 million head of cattle of 1950 was 3% above that of a year earlier and 15% greater than in 1940. Sheep at 18·5 million showed an increase, but were still 3·8 million head below 1940. Pigs, 3·3 million, were 8% more than 1949, but 5% less than 1940. Output of beef and veal in the nine months was 20% higher than in the same period of 1949, killings of sheep and lamb were 16% above the preceding year and pig slaughterings increased by 39%. Shipments of meat to Britain from Argentina were suspended in July 1950 because of a failure to agree on prices and had not been resumed by the end of the year. Rationing of meat and bacon continued throughout 1950 at a level of about 1*s.* 6*d.* a head for meat and 4 oz. for bacon.

The estimated per capita consumption of meat in pounds in various countries in 1948, with 1938 figures in brackets, was: Britain 74 (119), Australia 210 (245), New Zealand 194 (226), Canada 127 (111), Ireland 95 (76), United States 150 (127) and Argentina 240 (214). (C. A. Mo.)

United States. U.S. total production of meats increased moderately in 1950, being estimated at 22,420 million lb. as compared with 21,710 million lb. in 1949; the average in 1937-41 was only 17,674 million lb. A still higher production of 23,370 million lb. was forecast for 1951. The total civilian meat supply per capita in 1950 was estimated at 145 lb., about 1 lb. more than the previous year. U.S. exports of meats, estimated at 94 million lb. (carcase weight) during 1949-50, were slightly larger than the 75 million lb. in the preceding year, but very small compared with 1,376 million lb. in 1945-46. Near the end of 1950 storage stocks of meat and meat products amounted to more than 400 million lb., nearly 10% higher than 1949 or normal. Prices of meat animals in 1950 followed divergent trends. In general they strengthened after the Korean war began and the retail prices of some cuts went to record high levels. Price supports for pigs were abandoned (perhaps temporarily) in March by administrative decision. Beef cattle prices, at a high but not record level, showed less than usual fluctuation during the year. Poultry meat, both chicken and turkey, was produced and consumed in larger amounts in 1950, averaging 3% more for chicken and 22% more for turkey than 1949. (*See* also LIVESTOCK.) (J. K. R.)

TABLE. U.S. MEAT PRODUCTION
(in millions of pounds, dressed weight)

	1951*	1950	1949	1948	1947	Average 1937-41
Beef	9,800	9,580	9,448	9,079	10,429	7,196
Veal	1,300	1,293	1,322	1,412	1,599	1,022
Lamb and mutton	570	608	607	750	802	884
Pork	11,700	10,939	10,333	10,205	10,601	8,573
Total	23,370	22,420	21,710	21,446	23,431	17,675

* Forecast by U.S. Department of Agriculture.

MEDALS: *see* DECORATIONS AND MEDALS.

MEDICAL ARTICLES: *see* ALIMENTARY SYSTEM; ANAEMIA; ANAESTHESIOLOGY; ARTHRITIS; BACTERIOLOGY; BIOCHEMISTRY; CANCER; COLD, COMMON; DENTISTRY; DERMATOLOGY; DIABETES; EAR, NOSE AND THROAT, DISEASES OF; ENDOCRINOLOGY; EPIDEMICS; EYE, DISEASES OF THE; FOOD RESEARCH; GENETICS; GYNAECOLOGY AND OBSTETRICS; HEART DISEASES; HOSPITALS; INDUSTRIAL HEALTH; INFANTILE PARALYSIS; LEPROSY; MEDICINE; MENTAL DISEASES; NATIONAL HEALTH SERVICE; NERVOUS SYSTEM; NURSING; OSTEOPATHY; PHARMACY; PHYSIOLOGY; PLAGUE; PNEUMONIA; PSYCHIATRY; PSYCHOLOGY; SURGERY; TROPICAL DISEASES; TUBERCULOSIS; UROLOGY; VENEREAL DISEASE; VETERINARY MEDICINE; X-RAY AND RADIOLOGY.

MEDICINE. While in the political field the omens of 1950 were grim indeed, the reverse was true in the field of medicine. The year saw a host of achievements full of promise of victories in the war against disease. The advances were so many that it is impossible to do more than list the highlights. But some general observations deserve remark. First, the importance of team work became ever more obvious. The physician in the hospital or research institute now needed ever closer co-operation with the pathologist, biochemist, physiologist, pharmacist and other ancillary colleagues. Tremendous contributions were made by the pharmaceutical industry. It is worth noting that while a great discovery may be made by a Banting or a Fleming in the economically stringent circumstances of a university department, the subsequent work of exploiting and utilizing the discovery can only be done by the large pharmaceutical houses because of the great cost of development research and of translating a laboratory process to large-scale production. It was said for example, that the first gram of A.C.T.H. made by Armours cost a million dollars. All this is of significance in surveying the achievement of 1950.

Steroids and A.C.T.H. There were many further advances in the field of adrenal hormone function which had been so brilliantly illuminated in 1948 by Philip S. Hench and Edward C. Kendall (*qq.v.*) of the Mayo clinic, Rochester, Minnesota, and by Tadeusz Reichstein (*q.v.*) of Basle university, Switzerland. The importance of their discoveries on Cortisone was recognized by their being jointly awarded the Nobel prize for physiology and medicine for 1950. Intensive research by commercial chemists at once increased the supply and reduced the cost of these substances, enabling the clinicians to study their mode of action (though this problem had not been solved by the end of 1950). It was also possible to test the effects on a wider range of diseases, and Cortisone was found beneficial—and often dramatically so—in rheumatic diseases, early lupus erythematosus, asthma, Addison's disease, inflammatory eye disease, exfoliative dermatitis and pemphigus. Encouraging results needing further evaluation were obtained in various allergies, ulcerative colitis, psoriasis, gout and some rarer conditions.

It is noteworthy that A.C.T.H. or the adrenocorticotrophic hormone of the anterior pituitary gland discovered by Herbert M. Evans in California in 1925 was used clinically by R. E. Hemphill and M. Reiss (see *J. Mental Sci.*, *88*, no. 373, London, 1942) in 1942 in the treatment of mental disorder and that the hormone was supplied by the British firm of Organon. But six years had to pass before G. W. Thorn and others working with Armour laboratories in Chicago made it possible to link it up with the Cortisone discovery and recognize its full potentialities. It acts by stimulating the adrenal cortex to produce three groups of cortical hormones. The first is Compound F, closely similar to Cortisone (Compound E), which is only secreted in trace amounts. These both protect the body against "stress situations." The second set are desoxycorticosterone-like steroids which cause salt and water retention in the body. The third group are androgenic, that is, have an action similar to that of the male sex hormones. A.C.T.H. has a similar range of effectiveness to that of Cortisone and in addition has been used with quite remarkable success in extensive burns and in acute toxic incidents such as the bite of the black widow spider. The implications of Cortisone and A.C.T.H. were tremendous, and already indicated that much classical pathology and medicine would have to be rewritten. J. R. Mote of Chicago declared



Research workers in one of the laboratories in the new headquarters of the Medical Research council at Mill Hill, London, which were opened by the King on May 5, 1950.

" A.C.T.H. is not just a new drug; it demands a revolution in medical thought."

Both Cortisone and A.C.T.H., however, could produce undesirable physiological responses such as acne, hirsutism, cardiac irregularity, fatigue, oedema, rounding of the face, psychological disturbances and so on. Cushing's syndrome had occurred as a serious complication of the treatment. It was clear that even if supplies had been sufficient, release of these potent preparations for general use would have been most undesirable until a great deal more was known about their dosage, range control and possible dangers.

Much interest centred on reports that deoxycortone together with vitamin C produced remission of rheumatoid arthritis. Other investigators failed to confirm the results, and no decision was reached. The positive accounts were such however, that further research was justified.

Antibiotics. This group of remedies is produced by certain fungi and bacteria and includes penicillin and streptomycin. In 1950 the chief interest centred on aureomycin and chloramphenicol (or Chloromycetin) for these were curative over a different range of diseases from the first two. In addition chloramphenicol was the first antibiotic to be synthesized on a practical basis. In Great Britain, because of shortage of supplies, it was necessary to restrict the use of aureomycin and chloramphenicol to cases of ornithosis, brucellosis, lymphogranuloma inguinale and atypical pneumonia; and for chloramphenicol, also, to severe typhoid and salmonella septicaemia. Elsewhere the new drugs proved of great value in trachoma, whooping-cough, mumps, urinary tract infections, venereal disease, amoebic dysentery and several other conditions. For many of these there was previously no satisfactory therapy. Hundreds of thousands of cultures of micro-organisms were screened for the presence of new antibiotics and preliminary reports were made on several new substances. Amongst these terramycin, discovered by A. C. Finlay and his co-workers (see *Science*, *85*, Washington, 1950), appeared to be the most important. Its sphere of action was like that of aureomycin, and it would probably claim a place in the top class of antibiotics. It was available in Britain only for limited experiment. Bacitracin, also restricted to the U.S., was claimed to be probably the most effective antibiotic for local application as it is not destroyed by bacteria or the products of inflammation. Another newcomer reported at a World Health organization conference at Beirut, Syria, was fumigillin, which though only in the experimental stage promised to be of value against amoebic dysentery.

At the first International Congress of Medicine in Paris S. Waksman (see *Brit. Med. J.*, *ii*, 601, London, 1950) spoke hopefully of the possibilities of eradicating tuberculosis and of the role of the antibiotics streptomycin and neomycin (which he discovered). The latter might be most useful but still had to be treated with caution because of possible kidney damage.

Tuberculosis. The " white scourge " of man was specially in the minds of the medical world for, in addition to the antibiotics, valuable new experience was gained in the use of chemotherapeutic agents of which the chief was para-amino-salicylic acid or P.A.S. Not only is this of value alone as was shown in Sweden (see *Am. Rev. Tuberc.*, *61*, 597, New York, 1950), but a Medical Research council trial (see *Brit. Med. J.*, *ii*, 1073, London, 1950) indicated that it has a special place in combination with streptomycin.

Thiosemicarbazones, another class of chemotherapeutics, attracted attention following on enthusiastic German reports on Conteben or TBI-698. Parallel compounds were made in Britain and some were expected to take a useful place in the treatment of tuberculosis. There was an indication that they might also be valuable in leprosy, a disease resembling tuberculosis in many respects. Another new drug for leprosy was diamino-diphenyl sulphone, reported on favourably by J. Lowe (see *Lancet*, *i*, 145, London, 1950).

The controlled trial of B.C.G. vaccination begun in England in the winter of 1949 by the Ministry of Health proceeded successfully, and during 1950 some 15,000 people were vaccinated. The chief classes protected were nurses and medical students, and contacts, particularly children, who had been exposed to risk from " open " cases of tuberculosis.

Infectious Diseases. In Great Britain outstanding features were that the importance of diphtheria as a major public health problem continued to decline while that of poliomyelitis increased. The decline of diphtheria was due to the Ministry of Health's campaign for the immunization of children. Poliomyelitis was a serious menace for the fourth year in

succession, and it appeared that the statistics for 1950 might nearly reach those of the peak year of 1947 when there were 7,800 notifications and 715 deaths. Some public anxiety was aroused by the observation that very occasionally poliomyelitis appeared to follow immunization, for example with diphtheria prophylactics. A most careful investigation showed that, although there was some evidence that a relation might exist between the two, yet the cases were so few that the risk could be disregarded, and the observation did not reduce the desirability of protective innoculations, except possibly in areas of high poliomyelitis incidence. Much interest was focused on food infections, and notifications and increased activity by the Public Health Laboratory service showed that these were more common than hitherto suspected. A campaign for greater cleanliness in food handling was started, and local authorities set up "Clean Food guilds." An epidemic of measles occurred though not such as to occasion alarm. This disease has a regular cycle of alternate years of high and low incidence. The causes of this periodicity is unknown. Interesting observations were made on the occurrence of some rare infections in England. Q fever is an acute febrile disease first described in Queensland in 1937. It is caused by a micro-organism *Rickettsia burneti* and it appears to be caught from animals, either by drinking infected milk or by inhaling contaminated dust. Sporadic cases appeared in the south of England from Kent to Devon. Toxoplasmosis is a disease caused by a protozoan parasite. When a women is affected her offspring may show congenital abnormalities. It had been recognized in many countries since 1939 but only six cases were reported in Great Britain prior to 1950. A further 13 cases were reported, and A. Macdonald (see *Lancet*, *ii*, 560, London, 1950) considered the infection might be more prevalent in northwest England than was supposed. Canicola fever is another disease that was probably more general than was thought. Six cases in Bristol were reported by A. M. G. Campbell (see *Brit. Med. J.*, *i*, 336, London, 1950) in addition to the six previously known in Britain. The disease is caused by a protozoan parasite, *Leptospira canicola*, which is common among dogs, and there is evidence that up to 40% of dogs in Britain are infected at some time in their life. Finally in this group of seldom-recognized disorders is undulant fever, a milk-borne disease akin to Malta fever. Sir Weldon Dalrymple Champneys (see *Lancet*, *i*, 429, 477, London, 1950) in a painstaking study of close on 1,000 cases showed that this was far more prevalent in England than had been suspected. It was clear from all these researches that an extension of field bacteriology was likely to disclose information of great importance. The Public Health Laboratory service in England was an admirable tool for this work.

New Remedies. It is impossible to do more than catalogue some of the chief drugs which were introduced or gained importance in 1950. In the treatment of parkinsonism Artane, Benadryl, Lysivan and Phenergan attracted attention. Avomine, a new British antihistamine was introduced to counteract motion sickness. An extensive trial of antihistamines failed to show any effect against the common cold. Further evidence that ascorbic acid can have a drug-like action as well as a true vitamin effect was shown by the healing effect of large doses on corneal ulcers. Ion-exchange resins (which act in a parallel way to "Permutit" water softeners) were used with promising results in cardiac oedema and might be valuable in hypertension and other diseases. Tetraethylammonium bromide was shown to relieve pain in rheumatoid arthritis. In the U.S. new extraction methods put a long-known and largely discarded drug veratrine back into use for hypertension under the name of Veriloid. Suceryl, a new sweetening agent, was introduced for diabetics. Pentaquine was a new remedy for vivax malaria. Sir Stanford Cade reported he had found that vitamin B_{12} alleviated cases of cancer, and from the U.S. it was said that injection of colloidal gold isotopes was a promising treatment for the same disease. (W. P. K.)

United States. *Internal Medicine.* There was interesting evidence that people with hardening of the arteries have in their blood certain giant fatty molecules and that diets high in cholesterol over a long period of time may be partly responsible for arteriosclerosis.

Soviet doctors treated peptic ulcer by the "long sleep method" in which patients were kept under barbituric acid derivatives for several weeks. In the United States peptic ulcer continued to be a leading cause of disability, and was treated mostly by such drugs as banthine, which shuts off the stimulus from the sympathetic nervous system, and by surgical procedures for removal of portions of the stomach. Ordinary medical treatment involved also the giving of antiacid substances in tablets and the elimination from the diet of substances tending to increase acidity.

Radioactive isotopes were used to study the functions of various organs and to aid in the diagnosis of tumours of the brain. Radioactive iodine was used for accurate measurement of basal metabolism. Radioactive phosphorus was given in polycythaemia with an excess of red cells in the blood and in leukaemia with an excess of white cells. Radioactive tracers were also used to study the formation of the teeth and the causes of dental decay.

Anticoagulant drugs including dicumarol and heparin proved to be efficient in controlling thrombotic conditions including coronary thrombosis. Two new anticoagulant drugs called Paritol and Tromexan, were being studied.

Studies on antibiotic drugs produced a new antibiotic called terramycin which was found to be as efficient as aureomycin for a variety of conditions, especially in pneumonia and amoebic dysentery. Chloromycetin or chloroamphenicol was found to be useful in atypical pneumonia and also the most efficient antibiotic in combating typhus fever, Malta fever and diseases caused, like typhus, by rickettsia.

A new drug for convulsive disorders was produced called phenurone, which with tridione, dilantin and the barbituric acid derivatives achieved greater progress in handling such cases than anything previously developed. A new substance capable of digesting dead tissues in wounds and infections called tryptar, derived from the pancreas, received extended study.

Progress against infantile paralysis was marked by the establishment of the existence of three different types of virus, the introduction of blood tests which, it was believed, might permit earlier diagnosis, the proof that immunization is possible and that the gamma globulin such as is used in measles is useful. However, evidence also showed that there are hundreds of cases of people infected for every one paralysed and that the disease is exceedingly widespread so that immunity created by a mild attack serves to protect better than artificial inoculation. A virus like that of poliomyelitis called Coxsackie virus can produce a non-paralytic disease which is similar to poliomyelitis and is related to the epidemics of pleurodynia or Bornholm disease.

New Drugs. New modifications of sulphonamides were gantrisin and tibione, the latter claimed as useful in tuberculosis. New antibiotics included terramycin and an improved penicillin which was less sensitizing than those previously available. Terramycin was so named because it was developed from a fungus derived from earth. A substance called khellin which was isolated from the seeds of a plant called *Ammi visnaga* was found effective in dilating the coronary blood vessels. A drug called priscoline acts on the sympathetic nervous system to dilate blood vessels and was used in Bürger's disease and in some instances of diabetes to improve

circulation. Primaquine was a drug used for treating malaria; when used with quinine it was the most effective of all treatments for this condition. Tromexan acts essentially like dicumarol or heparin in preventing clotting of the blood. Banthine acts to prevent transmission of stimuli from the sympathetic nervous system and was used particularly in the treatment of peptic ulcer and in cases of excessive sweating.

Tablets containing chlorophyll were said to be effective in preventing body odours but the proof awaited further confirmation. New derivatives of morphine called pethadine and methadone were introduced as substitutes for this narcotic.

A report from the Veterans' administration indicated that the combination of streptomycin and paraminosalicylic acid was most effective in tuberculosis. Vitamin B_{12} was found more effective than any other drug in the treatment of pernicious anaemia. Among the new antibiotic drugs were netropsin and thiolutin. Netropsin showed great promise as an insecticide and thiolutin had specific effects against fungi. (*See* also cross reference MEDICAL ARTICLES.) (M. FI.)

MENDERES, ADNAN, Turkish statesman (b. Aydin, 1899), a rich landowner in southwestern Anatolia. He was educated at the American college in Izmir, where he was inspired with the ideals of western democracy, and graduated in law at Ankara university. He was a leading member of the Liberal party, an opposition group formed in 1930 by Fethi Okyar. After its suppression he joined the Republican People's party. Excluded from the party in June 1945 with three others, he set to work to help his leader Celâl Bayar (*q.v.*) to found and organize a new Democratic party, which secured the victory at the elections on May 14, 1950, and brought Bayar to presidential office. On May 22 Menderes was appointed prime minister. (MA. BR.)

MENTAL DISEASES. The 1950 Ministry of Health annual report for England and Wales included certain statistical information about mental diseases. The number of direct admissions to mental hospitals in the year ended on March 31, 1949, was 51,227 (21,271 males and 29,956 females); voluntary patients made up 31,648 (62%) and temporary patients 1,564 (3%) of this number. In the same period 39,859 patients were discharged from hospital: of these 16,445 were classified as recovered, 18,530 as relieved and 4,884 as not improved. Thus approximately 68·3% of those admitted were discharged as recovered or relieved and 32·1% as recovered. Deaths numbered 8,125.

The number of patients under care for mental diseases at the end of that year was 145,779 (males 42·8%; females 57·2%) and of this number 97% were in national health service hospitals. Those admitted to hospital for the first time numbered 36,028, or 70% of all direct admissions.

The report also gave statistics relating to mental deficiency. At the end of the year under consideration there were 54,887 patients resident in mental deficiency institutions (28,108 males and 26,779 females). There were also over 68,000 defectives in community care as follows: 5,289 under guardianship; 44,787 under statutory supervision; and 18,652 under voluntary supervision. Out of 6,442 ascertained as "subject to be dealt with," 1,047 were admitted to institutions. In the year under review 980 defectives were discharged from certificates.

The report stated that there were in England and Wales approximately 200,000 beds in use for mental diseases and mental deficiency and approximately 315,000 beds for other types of illness. It recorded that there was overcrowding by 12·2% but that there appeared to be a prospect of improvement in this direction.

There was still a shortage of nurses and also a serious insufficiency in the numbers of psychiatric social workers: of the latter there were only 300 in all, the annual increase by qualification being about 65 to 70; so that several years would elapse before there were enough for the 101 mental hospitals, 260 psychiatric out-patient clinics and 118 child guidance clinics of the country.

The opinion was expressed that the optimum size for a mental hospital was that of 1,000 beds, for a mental deficiency hospital that of 2,000 beds.

Reference was made to the working of the Disabled Persons act, 1944: the Ministry of Labour had established an industrial rehabilitation centre at Egham, which provided vocational guidance for persons disabled by physical or psychological disorder and requiring help before going to a government training centre; and there were also non-residential industrial centres in many parts of the country. Belmont hospital, Sutton, continued to treat those suffering from both neurosis and employment difficulties. (*See* also PSYCHIATRY.) (J. G. H.)

MENZIES, ROBERT GORDON, Australian statesman (b. Jeparit, Victoria, Dec. 20, 1894) first became prime minister of Australia on April 26, 1939, as leader of the United Australia (later Liberal) party. He resigned on Aug. 29, 1941. He succeeded J. B. Chifley as prime minister as the head of a coalition government of the Liberal and Country parties on Dec. 19, 1949. (For his early career see *Britannica Book of the Year 1950.*)

Fulfilling an election promise, on Feb. 8 he announced the ending of petrol rationing. On March 25 he broadcast an appeal to Brisbane waterside workers to return to work. At the end of April he introduced into parliament the Communist Party Dissolution bill. In a broadcast on June 23 he threatened to ask for a dissolution of parliament if the Labour-controlled Senate continued to delay legislation. On July 9 he left Australia to visit Great Britain, the United States, Canada and New Zealand, calling at Singapore and Karachi and on the Egyptian foreign minister in Cairo. In Rome he was received by Alcide De Gasperi (*q.v.*) and Count Sforza; during 14 days in London he had talks with Clement Attlee (*q.v.*) and with other ministers on defence and financial matters. He arrived in the United States on July 27 and conferred with the president and with members of the cabinet. He was decorated with the Legion of Merit by Harry S. Truman (*q.v.*) on July 28. He addressed both Houses of Congress on Aug. 1. He was in Ottawa for talks with Canadian ministers from Aug. 7-10, and received an honorary doctorate of laws from Vancouver university before flying to Tokyo to see General Douglas MacArthur (*q.v.*) and visit Australian troops in Japan. He held talks with S. G. Holland (*q.v.*) in New Zealand before returning to Canberra on Aug. 23. Immediately after his return the International Bank for Reconstruction and Development announced a loan of $100 million. He broadcast a report of his tour on Aug. 28. In September he broadcast three times on the defence programmes, in turn, of the navy, army and air force. On Dec. 22 he left for the Commonwealth conference in London.

METALLURGY. A few of the more important metallurgical developments during 1950 are summarized in the following paragraphs.

Aluminium. A new electrochemical process gave the metal a thin hard surface with a wear resistance comparable to case-hardened steel.

Cobalt. A new smelter was built in Canada, and another was planned at the Blackbird mine in Idaho.

Copper. Modification of the design of a blast furnace for melting scrap tripled the tonnage handled, cut coke consumption by two-thirds and reduced operating difficulties.

Indium. New solders carrying from 10% to 50% of indium

showed greatly improved resistance to strong alkalis.

Iron. Briquetting was being tried as a substitute for sintering blast furnace flue dust and iron ore fines. The turbo-hearth was a new process combining the principles of the open-hearth furnace and the side-blown Bessemer converter. Newly developed methods of improving the capacity of iron blast furnaces were evaluated as follows: (1) increasing blast volume up to 25% added 20% to capacity; (2) increasing top pressure by 60% added 15%; (3) increasing the oxygen content of the blast by 25% added 17%. Combinations of the three resulted in the following approximate increases: 1+2, 36%; 1+3, 40%; 2+3, 35%; 1+2+3, 58%. Cast iron treated with a nickel-magnesium alloy became ductile when annealed, because of spheroidizing of the graphite, resulting in physical properties comparable to steel.

Magnesium. This metal found new applications in the textile industry, its light weight making it advantageous in loom components.

Titanium. Considerable progress was made in the commercial production of titanium metal in forgings, bar, sheet, strip and wire, but the price was still too high for extended application. Ingots up to 500 lb. had been made, and larger ones were expected.

Alloys. An alloy of eight metals (cobalt, nickel, molybdenum, chromium, manganese, iron, beryllium and carbon) was being used as a substitute for osmiridium in pen points. It was non-corrosive, non-magnetic, resistant to crystallization changes, and had a tensile strength of 368,000 lb. per sq.in. A non-eutectic alloy of tin and bismuth, with negligible shrinkage and a melting range of 281°-338°F. was found especially suitable for precision casting.

Hot Machining. Worthwhile results were being obtained in an experimental development of methods for machining metals at temperatures as high as 1,500°F., the temperature being maintained by high-frequency induction heating.

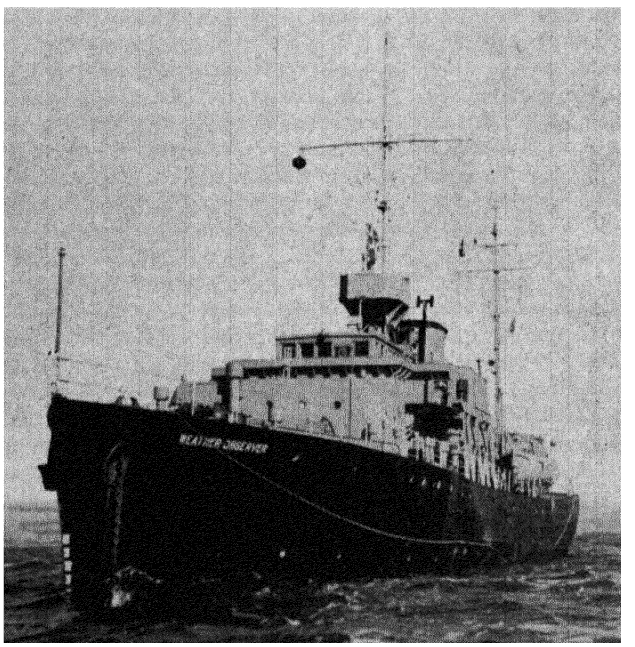
Testing. Radioactive cobalt-60 was coming into use as a substitute for radium in radiographic work. The same gamma-ray equivalent, with a half-life of 5·3 years, could be purchased for the price of two to four months' rental of a radium capsule. Ultrasonic methods were developed for detecting segregation and mechanical defects in high-speed tool steels.

Welding. Difficulties in soldering on metal surfaces plated with passivated zinc were overcome by a special method of resistance welding. (G. A. Ro.)

METAL PRODUCTION: *see* MINERAL AND METAL PRODUCTION.

METEOROLOGY. The Royal Meteorological society celebrated its centenary in 1950 with events at Oxford and London which were attended by distinguished meteorologists from many parts of the world. The society, the oldest learned society for meteorology in the world, was founded after an earlier body, the Meteorological Society of London, with the young Ruskin as one of its ambitious sponsors, had passed through a somewhat meteoric life-cycle between the years 1823 and 1841. The present society was in 1950 in a flourishing condition and ready to meet the demands made on it through the increasing application of meteorological principles to human affairs.

The year 1950 was the last full year of life of the International Meteorological organization which, founded in Leipzig and Vienna in 1872-73 by the national meteorological services of the world, had functioned steadily as a co-ordinating and lead-giving body in the design of observations, instruments, weather codes and communications and in the analysis of data. This work was to be taken over by the World Meteorological organization, an agency of the United



The weather ship "Weather Observer" normally stationed in mid-Atlantic, seen here at Greenock, Scotland, in Sept. 1950.

TABLE I. MEAN MONTHLY TEMPERATURES, °F.

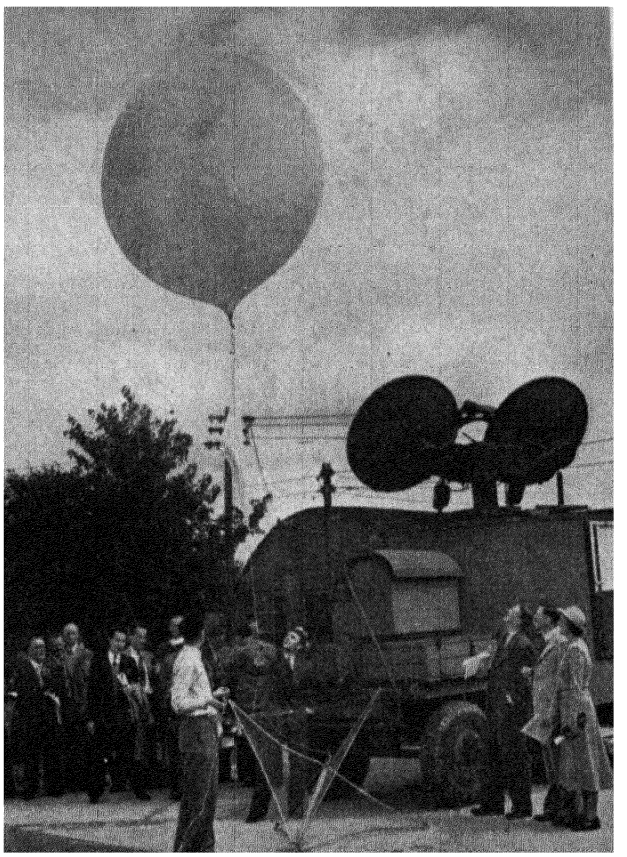
	1949 July	Aug.	Sept.	Oct.	Nov.	Dec.	1950 Jan.	Feb.	March	April	May	June
Fort William	58·1	58·3	56·3	51·3	44·1	40·9	41·7	37·8	44·6	43·0	51·1	55·3
Inverness	58·7	58·1	55·9	50·1	42·9	38·9	41·1	37·5	44·1	42·3	47·9	56·5
Perth	60·7	59·3	57·1	50·5	41·7	39·9	38·9	37·7	44·4	43·1	50·6	58·3
Edinburgh	60·3	58·9	57·7	51·9	43·5	40·5	39·9	38·3	44·5	43·3	48·3	58·5
Oban	58·7	58·3	58·6	52·1	45·1	41·7	41·6	39·5	44·9	43·4	52·6	56·1
Glasgow	60·9	59·9	57·6	51·0	42·7	39·5	38·8	37·6	44·0	42·9	51·9	59·1
Aberystwyth P.B.S.	61·9	60·5	60·4	54·5	45·5	43·2	40·9	42·9	45·5	45·1	52·9	58·9
Armagh	60·3	60·1	58·3	52·1	44·2	42·0	42·5	40·7	46·1	45·1	52·5	58·9
Berwick	59·5	58·9	57·9	51·4	43·4	42·1	40·5	39·0	44·6	43·7	48·3	57·5
York	63·3	62·7	61·3	53·1	43·8	42·4	40·3	40·9	45·7	45·7	52·1	62·3
Cambridge	63·9	63·0	63·2	53·9	43·6	42·7	39·9	42·9	45·9	—	—	—
Nottingham	64·7	63·5	62·2	53·1	43·8	42·5	40·1	41·7	45·5	45·5	51·9	62·2
Birmingham	64·0	62·3	61·2	52·8	43·4	41·8	39·5	41·8	45·8	45·6	51·7	61·7
Oxford	65·7	63·9	63·1	54·3	44·1	43·1	39·6	43·1	46·1	47·0	52·8	62·5
Cardiff	65·2	63·8	62·3	55·3	45·6	43·6	40·5	43·3	46·7	47·5	53·9	61·5
Kew	66·5	64·9	64·4	54·6	43·9	43·6	40·8	43·5	46·5	47·5	54·1	63·5
Tunbridge Wells	64·7	63·3	63·1	54·0	42·5	41·4	38·6	42·5	45·1	45·7	52·8	62·3
Bournemouth	65·3	64·9	43·4	55·9	45·9	44·7	40·9	44·5	46·9	48·1	55·3	61·9
Ringway (Manchester)	62·3	61·6	60·7	52·5	43·6	41·9	39·9	40·9	45·2	44·8	51·5	60·7
Bristol	64·7	63·7	61·9	54·9	44·9	44·5	*—	43·5	46·1	47·0	52·9	61·0
Llandudno	62·5	62·3	60·8	55·7	47·7	45·7	43·0	44·1	47·1	46·9	51·2	60·5
Aldergrove	59·9	59·3	57·9	51·7	43·7	41·1	41·9	39·5	45·1	44·1	51·2	58·3

* Bristol (Whitchurch) to Jan. 1950, when incomplete readings for the month were received. From Feb. 1950 station was at Bristol (Filton).
SOURCE: Meteorological Office, Air Ministry, Harrow.

Nations which was expected to be formally set up in March 1951.

Forecasting. The understanding of weather processes and systems was not sufficient to allow of forecasting on a thoroughly scientific basis and highly empirical methods were still in use in 1950. As an instance, it was known as a matter of observation that the depressions of temperature latitudes passed through a more or less characteristic life cycle, moving generally with an eastward component during that part of the cycle before they ultimately stagnated and lost their identity. It had only been in the immediately preceding years that there had begun to be, in any worthwhile sense, an understanding of why the life cycle should be roughly as it was observed and that knowledge was still far too crude to enable forecasts of the life history of an individual disturbance, with all the complexities of the individual occasion, to be made on sound and well-understood principles. It was possible to follow it from chart to chart, observing its motion, structure, intensification or weakening, and extrapolate for the particular disturbance against a background of how such systems usually behaved and how this one had been behaving. The great increase in observational data in the years just before 1950, particularly of conditions in the free atmosphere gained largely from radio-sondes, had added much to the empirical picture, given a more complete statement of the facts which called for explanation, and provided a surer touchstone for the various developing theories. It could be said, for example, that depressions and associated high pressure regions were the necessary outcome of the distribution of thermal energy in the atmosphere and that they led to a re-distribution of that energy (as in a pot of porridge brought to the boil). But successful day-to-day forecasting required an understanding of the details of that process and how these might be affected by the slightly different circumstances of each occasion.

Another line of attack was being examined. It was not supposed that the behaviour of the atmosphere was conditioned by any other than the basic laws of classical physics, Newton's laws of motion, the first and second laws of thermodynamics, the equations of state of atmospheric gases and the laws of radiation being the most important. Why not then, it was thought, set up the equations which express these laws, and solve them for the quantities which go to make up weather-wind, precipitation, temperature and so forth, using as initial conditions the state of the atmosphere as it might be observed at any arbitrary zero of time? Such an attempt, made 30 years earlier by L. F. Richardson in his *Weather Predication by Numerical Process*, had been a glorious failure.



An observation balloon about to be released at Dunstable in July, 1950, when members of the Royal Meteorological society visited the central forecasting office during the society's centenary year.

The omens in 1950 were a little more propitious for, although the task was one of stupendous magnitude, modern high-speed electronic calculating machines put an altogether different light on such a project. But it was necessary to remain very cautious as to the possible outcome. The equations were still not known in all their necessary detail (this applied in particular to the transfer of heat and water vapour across the lower boundary of the atmosphere by turbulence, to the drag of the earth's surface on the winds above, and to the effects of radiation in the atmosphere), and the effects of condensing water vapour to form cloud and precipitation were a source of tremendous complication. For these reasons

TABLE II. TOTAL MONTHLY RAINFALLS IN INCHES

	1949 July	Aug.	Sept.	Oct.	Nov.	Dec.	1950 Jan.	Feb.	March	April	May	June
Fort William	2·32	9·08	4·94	12·15	8·47	18·00	9·85	11·13	5·69	7·47	2·87	5·80
Inverness	1·36	4·84	1·93	1·69	1·80	7·34	2·47	2·55	1·22	3·27	1·83	2·06
Perth	2·13	2·57	1·16	3·91	2·49	3·34	2·26	2·69	2·00	2·16	1·58	1·56
Edinburgh	2·71	3·33	1·75	4·25	3·51	3·85	1·26	2·68	2·20	1·98	1·89	1·69
Oban	3·00	7·24	3·17	6·43	7·45	11·92	6·29	7·39	3·57	4·17	1·98	5·18
Glasgow	2·36	4·66	2·10	5·78	3·75	7·63	2·86	4·45	3·00	3·14	1·28	2·45
Aberystwyth P.B.S.	1·87	3·07	2·04	8·70	6·73	4·16	1·36	5·64	1·52	3·73	0·91	2·58
Armagh	2·73	3·03	2·47	5·08	2·42	4·58	1·75	2·78	1·08	4·05	0·85	2·83
Berwick	1·51	2·07	2·02	4·37	2·67	1·49	0·72	1·73	0·87	2·16	1·35	1·15
York	2·42	1·76	0·80	2·24	3·25	1·91	1·38	3·37	0·98	2·64	1·69	1·12
Cambridge	3·28	1·07	0·21	3·22	1·77	1·00	0·86	3·08	0·50	1·86	2·51	1·48
Nottingham	3·38	2·27	1·55	4·37	2·37	1·94	0·99	4·02	0·82	2·36	1·72	1·47
Birmingham	2·77	2·11	1·11	5·42	3·26	1·63	0·74	5·28	1·56	1·96	1·61	2·21
Oxford	0·91	1·48	2·29	6·38	2·52	1·34	0·55	4·09	0·87	2·14	2·19	1·54
Cardiff	1·31	2·33	3·65	8·72	4·77	4·18	1·36	6·97	2·18	2·68	2·10	1·29
Kew	1·12	1·50	0·35	5·24	2·16	1·47	0·87	3·16	0·65	2·44	1·72	1·85
Tunbridge Wells	0·37	1·39	2·23	7·39	3·58	1·31	1·08	5·12	1·35	2·63	1·55	1·42
Bournemouth	0·38	0·86	4·44	7·61	3·82	1·97	0·78	5·34	1·35	2·62	1·90	1·12
Ringway (Manchester)	2·13	1·93	0·92	2·73	4·72	3·83	1·56	3·92	1·72	3·38	1·21	2·55
Bristol	1·43	1·91	2·60	7·58	3·48	1·95	*—	5·04	1·52	2·03	2·04	2·08
Llandudno	1·21	2·13	0·56	4·61	3·10	4·09	1·00	5·29	1·14	2·31	0·50	1·24
Aldergrove	1·67	2·70	1·93	4·99	2·41	3·84	1·23	2·72	1·31	3·68	1·22	2·37

* Bristol (Whitchurch) to Jan. 1950 when incomplete readings for the month were received. From Feb. 1950 station was at Bristol (Filton).
SOURCE: Meteorological Office, Air Ministry, Harrow.

TABLE III. MEAN MONTHLY TEMPERATURES, °F.

	1949 July	Aug.	Sept.	Oct.	Nov.	Dec.	1950 Jan.	Feb.	March	April	May	June
Hamburg	63·0	62·6	63·0	53·1	41·9	39·9	32·9	38·5	42·8	45·3	56·5	64·0
Stockholm	64·4	59·7	59·5	46·8	40·1	34·7	24·1	30·2	34·9	42·6	52·5	60·6
Brussels	65·7	64·6	66·0	55·0	41·4	39·7	34·3	43·0	45·0	46·9	56·8	64·4
Lisbon	74·1	75·7	75·3	67·7	60·9	55·7	53·3	55·7	58·5	60·9	63·0	68·4
Malta	77·7	77·3	76·3	69·1	63·0	58·1	53·9	54·9	55·5	59·9	67·1	75·4
Cairo	82·2	80·4	76·3	74·5	69·6	59·7	55·0	56·7	64·2	74·8	75·7	80·2
Baghdad	92·7	92·9	83·2	76·0	64·3	53·3	43·4	48·3	61·5	74·5	81·1	89·1
Aden	90·5	89·4	89·7	83·5	79·7	78·2	78·1	78·5	80·7	81·7	86·3	89·7
Salisbury, Southern Rhodesia	57·7	62·5	68·0	70·9	72·6	69·8	69·5	69·7	68·2	66·6	58·9	56·6
Capetown	55·0	56·7	58·9	62·7	65·1	68·5	71·0	69·2	63·6	62·1	60·9	56,2
Colombo	80·5	81·5	81·9	80·7	79·9	78·7	78·8	80·0	81·4	82·0	83·8	81·4
Toronto	73·8	72·8	58·4	55·3	37·1	32·2	31·5	23·9	28·3	39·5	55·2	64·5
Winnipeg	68·0	70·0	54·0	41·0	30·0	4·0	—16·0	1·0	12·0	29·0	49·0	59·0
Victoria, B.C.	59·0	60·0	59·0	49·0	49·0	39·0	26·0	40·0	42·0	47·0	51·0	58·0
Hobart	47·9	48·7	50·7	52·3	56·8	56·9	59·7	60·4	58·5	54·0	48·7	46·6
Wellington	48·1	47·5	49·9	54·1	55·2	58·6	60·8	60·4	58·3	53·8	54·6	47·6
New York	78·6	76·6	65·7	62·8	46·6	40·2	42·3	32·9	37·0	48·3	58·4	70·4
Washington, D.C.	81·4	78·2	67·1	64·0	48·4	42·0	48·4	38·7	41·8	52·4	64·6	72·0
San Francisco	57·6	59·4	62·4	58·5	59·8	50·6	46·9	51·9	53·2	56·1	54·7	58·8

SOURCE : Meteorological Office, Air Ministry, Harrow.

it was necessary to use highly simplified and approximate forms of the equations—in effect, to deal with a model atmosphere which departed substantially from the real atmosphere while retaining a realistic likeness to it.

Such model atmospheres were operated upon by the new high-speed digital computing machines and "forecasts" were produced—after the event, for this was experimental work. It was highly encouraging to the meteorologist to discover that the "forecasts" so obtained compared not unfavourably with forecasts produced by the usual, mainly empirical methods. Thus as further experience with the new techniques was gained and models were adjusted to come more into line with reality there appeared to be a chance of calculating some sort of weather almanac as already a nautical almanic or ephemeris was produced. But it remained to be determined whether the weather was indeed forecastable at all beyond a very limited period, even if the degree of precision aimed at was allowed to diminish as the period lengthened. For it was known that the atmosphere was capable of assuming a number of unstable configurations and for such systems a small trigger action, hardly forecastable, might lead to effects incommensurate with the cause. The variability of weather day-by-day, or even hour-by-hour in showery conditions, was an expression of this tendency towards atmospheric instability. However, in spite of the variability of weather there still existed climate: that is, the swings of the weather pendulum did not go entirely out of bounds. This observation gave hope that a useful forecast of the weather a week or even a month ahead, in its general level if not in its detail, might ultimately be possible.

Weather of 1950. *British Isles.* The first three months of 1950 were notably mild in the British Isles, in that respect following the pattern of the two preceding winters, and so provided added recompense for the severity of the second half of the 1946-47 winter. January and March were not only mild but dry, a rather unusual combination at that time of year, January's dryness in much of England and Wales being a record since the 1890s. February, on the contrary, was very wet, with more than twice the average amount of rain in England and Wales.

The weather of April and May was changeable, the overall temperature being near average. There was an unusually severe snowstorm in southeast England on April 25-26 which, coming so late, did considerable damage to the fruit then in formation. June flamed indeed, and very early, and gave the only sustained good weather of the so-called summer months. It was warm, sunny and dry, except in northwest Scotland, and as early as June 6 the temperature rose to 89°F. in Lancashire and London. July and August were wet and gave few high day temperatures, but the nights were warmer than usual and so the mean day temperature departed little from average. September was undistinguished except by its large rainfall—it was the wettest September over Britain since 1869, except for 1918.

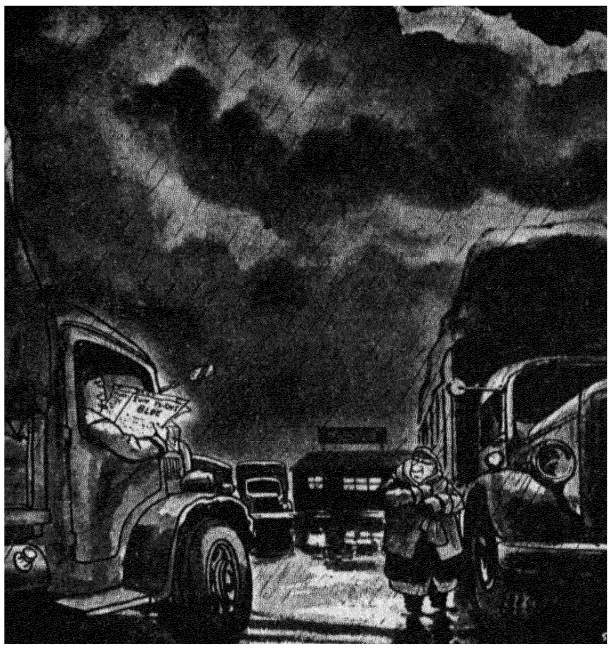
Early autumn was dry and no rain whatever was recorded at Kew observatory in October, but November was very wet and some flooding occurred. England and Wales as a whole received 172% of the November average rainfall, there being only seven wetter Novembers since 1867, and more than twice the average was received from Cornwall to Kent and in northeast England. December was generally cold and rather dry but provided unusually heavy snowfalls for the time of year.

Considering the year as a whole, rainfall was above average in most places, by as much as 30% in the extreme northwest and southwest and by about 10% to 20% in most areas:

TABLE IV. TOTAL MONTHLY RAINFALLS IN INCHES

	1949 July	Aug.	Sept.	Oct.	Nov.	Dec.	1950 Jan.	Feb.	March	April	May	June
Hamburg	1·85	2·84	3·11	1·06	2·05	5·67	2·64	4·06	1·57	3·90	2·76	1·52
Stockholm	2·8	2·8	0·8	2·0	2·8	2·8	1·2	1·6	0·8	2·4	0·8	2·4
Brussels	0·78	2·24	1·50	2·30	2·18	2·91	2·34	4·07	0·80	3·16	3·63	2·62
Lisbon	0·00	0·00	5·64	0·85	5·03	3·34	1·67	1·87	1·94	0·56	3·33	1·48
Malta	0·01	0·05	0·00	7·32	4·74	0·96	6·44	2·85	3·28	0·86	0·18	0·01
Cairo	0·00	0·00	0·00	0·00	1·65	0·98	0·38	0·12	0·00	0·00	0·06	0·00
Baghdad	0·00	0·00	0·00	0·00	0·00	1·27	0·49	0·69	0·39	0·13	0·73	0·00
Aden	0·79	tr.	0·20	0·00	0·39	6·30	0·11	0·03	tr.	0·00	0·00	0·00
Salisbury, Southern Rhodesia	0·12	0·00	0·00	0·09	2·54	5·70	7·96	3·66	3·46	2·81	0·02	0·00
Capetown	3·9	3·8	2·5	1·0	1·2	0·4	0·27	0·11	0·31	4·62	1·41	1·95
Colombo	6·5	4·8	3·0	13·0	9·7	3·3	0·82	10·6	7·64	4·61	10·19	6·29
Toronto	3·14	1·32	3·53	1·82	2·03	3·01	4·02	3·95	2·29	2·20	1·04	2·22
Winnipeg	2·3	2·3	1·5	5·7	1·3	1·6	1·8	0·7	0·4	1·7	4·6	3·3
Victoria	0·6	0·6	1·2	2·7	6·4	8·6	4·8	2·9	4·7	1·3	0·7	0·3
Hobart	3·3	0·4	0·6	3·8	2·4	1·5	0·8	0·8	1·2	1·2	2·4	1·6
Wellington	5·83	4·42	2·01	2·78	4·52	3·92	1·01	1·95	1·39	4·86	1·43	4·35
New York	3·37	3·87	2·92	2·03	1·07	2·03	2·42	4·15	3·87	2·04	2·50	2·40
Washington	4·6	4·6	3·5	3·2	0·7	1·7	2·0	2·8	3·9	2·0	5·9	3·1
San Francisco	0·06	0·04	tr.	0·08	1·18	2·77	7·40	2·33	1·65	0·87	0·37	0·07

SOURCE: Meteorological Office, Air Ministry, Harrow.



In Sept. 1950 when the sun appeared blue in colour the above cartoon by Giles, " I don't care what ——— colour it is, I'd like to see it," was published in the " Daily Express " (London).

the expectancy of a 30% excess over average is once in 40 years. It was a little below average along the Sussex coast, in Suffolk and in some Midland counties. For Scotland it was the third consecutive wet year, whereas wet and dry years had alternated in England and Wales since 1944. The summer rain was the most notable: from July to September England and Wales received 14·0 in., more than in any similar period since 1869 with three years excepted; Scotland, with 20·5 in., exceeded all records.

Europe. January was generally cold, particularly in southeast Europe, but the balance was more than redressed in the next two months. Spring was also warmer than usual in most countries and the relatively high temperatures were largely maintained throughout the summer, notably in southern Europe. Drought accompanied the heat in the latter regions and Yugoslavia suffered particularly with poor food crops. Summer rains in France and northern Italy were often torrential, and hail did great damage there to ripening grapes and corn crops. Scandinavia experienced a mild autumn with a dry October and a wet November; France, Italy and Spain had a mild November. December was notably cold in France and Western Germany, and gave much snow in Spain where public transport, power cables and telephones were badly affected. (*See* also RADIO, SCIENTIFIC DEVELOPMENTS IN.)

(P. A. SD.)

METHODIST CHURCH. Returns showed that in 1950 there were 744,326 members of the Methodist Church in Great Britain, though the number of adherents is considerably larger. Indeed membership figures show an increase for the second year in succession: after a period of decreases, this was regarded as an indication of revived interest in evangelical Christianity. The total number of Methodist adherents in the world was believed to be more than 30 million. In Great Britain there were 3,394 ministers and probationers and 1,218 supernumeraries. In the Sunday schools there was also an increase: the scholars numbered 794,340 and the teachers 121,232, as against 788,930 and 120,082 in 1949 (over three years the number of scholars attending Methodist Sunday schools in Great Britain had increased by more than 55,000). The decrease in the membership of Methodist youth clubs was slight and due, it was thought, to the failure of groups formed hastily without adequate personnel and equipment.

The call to action issued by the 1949 conference was carefully examined by the individual societies. Each church frankly considered its condition and the possibility of meeting modern needs by the re-organization of its various activities and by a deepening of its spiritual life. The results were to be brought before the next conference after the separate reports had been sent from the churches to the circuits and from the circuits to the districts.

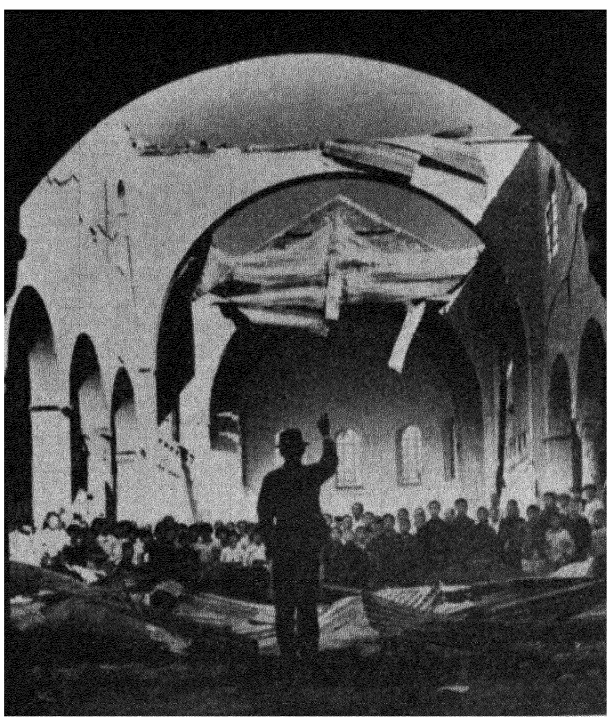
A " Go-to-the-People " campaign was initiated by the Home Mission department at a great open-air rally in Hyde park in May: travelling film vans and other apparatus reached many areas in industrial and rural districts; and caravans and travelling Sunday schools evangelized the less developed parts of the country. Work amongst the coal-miners was intensified by a campaign in south Yorkshire, under a specially selected team of ministers and lay workers with personal experience of life in colliery areas.

At the Bradford conference the Rev. W. E. Sangster was elected president and C. W. Towlson, formerly headmaster of Woodhouse Grove school, vice president. The Rev. H. Watkin-Jones of Headingley college, Leeds, and H. Cecil Pawson of Newcastle-upon-Tyne were designated as president and vice president for 1951. The Rev. Eric W. Baker was elected to succeed the Rev. Edwin Finch as secretary of the conference in 1951.

In Australia the Methodist church continued its three-year drive to evangelize the masses and to make plain the social implications of the Gospel, especially to modern youth. There were 144,195 full members and 35,726 junior members.

In South Africa racial problems remained a matter of deep concern to the churches; and Methodist policy sought to break down the barriers of caste and colour. An increase of 5,000 in the membership returns followed similar increases over the past ten years. (L. F. C.)

United States. A thorough-going survey and analysis of the organizational structure of the Methodist Church, ordered



A Methodist minister holding a service in his destroyed church at Wonsan, Korea, Nov. 1950.

by the 1948 general conference, made progress during 1950. The survey commission utilized the services of a firm of industrial engineers. All but six of the missionaries in Korea were evacuated, but no news of these six had been received by the end of the year. Of more than 300 missionaries in China, all except 65 had left by late December. Withdrawals were hastened by the intense anti-American feeling that developed near the end of the year.

The membership of the 40,158 churches at the end of 1950 was 8,935,647. This did not include 734,455 preparatory members. The increase in membership over 1949 was 140,078. Contributions for all purposes totalled $244,676,674, an increase of $15,379,563. Benevolences, as distinguished from local church and general administrative expenses, were $38,508,675. More than 2,000 new church schools were opened, bringing the total to 37,912. These schools were administered and taught by 492,170 officers and teachers. 1950 was a record year in the building of new churches.

(R. SY.)

MEXICO. Federal republic of North America lying between the United States and Central America. Area: 760,373 sq.mi. Pop.: (1940 census) 19,653,552; (1950 census, prelim.) 25,367,802; about 55% of the population was *mestizo*, 29% Indian and 15% white. Language: Spanish, but an estimated 6·29% speak only Indian tongues. Religion: predominantly Roman Catholic. Chief towns (pop., 1950 census): Mexico City (federal district, 2,527,328); Monterrey (339,634); Guadalajara (337,000); Puebla (229,976); San Luis Potosi (156,324); Mérida (155,899); Culiacan (144,550). President, Miguel Alemán Valdes.

History. The republic enjoyed great material prosperity, traceable to many factors: more balanced trade resulting from stabilization of the peso in June 1949, a record cotton yield, exceptional growth in industry and an estimated $150 million income from tourism. With large dollar reserves in hand the government removed as from Jan 1, 1951, curbs on the importing of luxury items which had been prohibited since 1946, including motor vehicles, wireless sets, cigarettes, nylon articles, clothing and wines. Ramón Beteta, the minister of finance, indicated that existing curbs would be replaced by higher import duties on all articles except raw materials, machinery and industrial equipment. Also in the economic field, 1950 witnessed the mutual renunciation of the Mexican-U.S. reciprocal trade agreement of 1942, a rise of between 10% and 20% in the cost of living and the issue of the republic's first savings bonds (100 million pesos sold at half their face value, bearing 7·17% interest) to finance agriculture, industrial development and low-cost housing. Another event of great economic significance was the announcement by President Alemán of a $150 million loan to Mexico from the U.S. Export-Import bank to develop rail and road transport, agriculture, irrigation and electric power generation.

The accelerated tempo of industrial development in 1950 was reflected in the establishment during the first six months of 209 new enterprises with an average investment of $450,000 as compared with 395 new industries with $242,000 for the entire year 1949. In the field of power and irrigation development, the government revealed that dams then under construction would, when finished, bring into cultivation not less than 2,236,255 ac. of land now dependent on rains. During the year, President Alemán inaugurated the new Cuauhtemoc dam (capacity, 45 million cu.m.) in Sonora state, which would bring under cultivation some 5,000 ac. of desert land. Construction projects under way in August 1950 totalled $456 million in value, with Mexico surpassed only by Venezuela among Latin American nations in new construction.

In June the republic completed its seventh census in one day with the help of nearly 500,000 citizens, and preliminary reports indicated a growth of approximately 6 million in the decade 1940-50. During 1950 the government decreed that a new state-aided organization should be set up to manufacture medicine in an endeavour to force down prices for medical products in the republic.

In his fourth annual report to the nation on Sept. 3, President Alemán announced that production and employment were high, that foot-and-mouth disease finally had been defeated, that agriculture was thriving and that Mexico would comply with decisions of the Security council of the U.N. and maintain the solidarity of the continent.

In the field of politics the big issue was the presidential succession in 1952, and several prominent leaders had been mentioned as possible candidates to succeed Alemán. In spite of pressure from sections of the Partido Revolucionario Institucional, the government party, Alemán himself announced on several occasions that he would not be a candidate for re-election, stressing his decision as unbreakable. This stand reaffirmed the no re-election principle which was incorporated in the Mexican constitution and which had been an important issue in Mexican politics since 1910.

Education. Schools (1949): kindergarten 837, pupils 98,155, teachers 2,887; primary 24,625, pupils 2,997,198, teachers 67,860; secondary 466, pupils 80,598, teachers 7,805; teachers' training colleges 77, pupils 26,998, teachers 2,854; technical 199, pupils 41,928, teachers 3,676; agricultural 16, pupils 5,949, teachers 701; universities and institutions of higher education 12, students 35,602, professors and lecturers 4,429. Illiterates were estimated in 1950 at 20·79% of the population, as contrasted with 38·39% in 1940.

Agriculture. Peasants were encouraged to take full advantage of new lands being made available under the government's huge irrigation programme, as the government made an effort to increase production through encouragement of the profit motive. The year saw abolishment of the government's subsidy on wheat imports, originally granted to keep the price down on home markets. No outbreak of the foot-and-mouth disease appeared in the region where 17 million animals had been vaccinated at the cost of 208 million pesos in 1949 and 130 million pesos in 1950. Main crops (1949-50, '000 metric tons): maize 2,535; wheat 518; barley 139; rice 204; sugar, raw 750; beans 231; chick peas 99; tobacco 27·5; coffee 72·7; cotton 913,000 bales; vanilla 220,460 lb.; bananas 606,265 stems; pineapples (export) 154,322 units. Livestock ('000 head, 1949): cattle 14,500; sheep 5,100; goats 8,900; pigs 5,600; horses (1946) 2,641; mules (1946) 1,001; asses (1946) 2,471.

Industry. Raw materials ('000 metric tons): iron ore (metal content) 246·6; lead 220·7; zinc 178·4; copper 57·2; antimony 5·8; manganese 23·8; graphite 23·8; arsenic 3·6. Also: gold 12,600 kg.; silver 1,538,000 kg. The petroleum industry produced 60·9 million bbl. in 1949, and an estimated 72 million bbl. in 1950.

Foreign Trade. (1949, million pesos) imports 3,527; exports 3,623; (1950, eight months, million pesos) imports 2,966; exports 2,905·5. Main imports: machinery, vehicles, scientific apparatus, mineral and metal products. Main exports: base and precious metals, vegetable products (mainly cotton) and animal products. Leading countries in Mexico's foreign trade in 1949: U.S. (82·8%); U.K. (2·0%), Canada (1·7%).

Transport and Communications. Railways (1949): 16,500 mi. In 1950 the government announced a three-year plan for improving the national railways by renovating, converting all lines to standard gauge, reconditioning and increasing rolling stock and installing other new equipment. Shipping received new impetus during 1950 with announcement by the government that it would permit 100% foreign capital investment in any international shipping firm set up within the republic. In the period 1940-50, Mexico's merchant fleet expanded from 10 vessels (of 1,000 tons gross or over) with a tonnage of 23,815 to 21 vessels grossing 106,000 tons. In March 1950 there were approximately 14,212 mi. of roads of which 12,630 mi. were all-weather roads including 8,417 mi. of paved road. Mexico's link in the Pan-American highway was completed to the Guatemalan border in May. Registered motor vehicles (Dec. 1949): cars 160,580; buses 16,169; lorries 106,321; motor cycles 5,298. Air transport (all lines, 1948): 22,085,925 mi. flown and 815,118 passengers carried. Telephones (1949): 239,749. Wireless sets (1949): 1,221,360.

Finance and Banking. (million pesos) budget (1950 est.): revenue 2,748; expenditure 2,746·5. Estimated national income (1949): 25,600. Money supply (May 1950; in brackets May 1949): currency circulation 2,354 (2,024); deposit money 2,200 (1,791). Monetary unit: *peso* with exchange rates (Dec. 1950) of 24·22 pesos to the £ and 8·65 pesos to the U.S. $.

(C. D. H.)

MIDDLE CONGO: *see* FRENCH EQUATORIAL AFRICA.

MILK: *see* DAIRY FARMING.

MINERAL AND METAL PRODUCTION.

Aluminium. World production of aluminium showed little improvement in 1949, and in many countries the output declined. The outputs of the chief producing countries and the world totals during 1949 and the years immediately before are shown in Table I.

TABLE I. WORLD PRODUCTION OF ALUMINIUM
(thousands of short tons)

	1944	1945	1946	1947	1948	1949
Austria	44·3	5·8	1·1	5·0	14·7	18·9
Canada	462·1	215·7	193·4	299·0	367·1	366·8
France	28·8	41·0	52·9	58·6	71·4	65·0
Germany	210·5	22?	—	—	8·0	26·5
Great Britain	39·7	35·7	35·4	32·4	33·6	34·0
Italy	18·5	4·8	12·2	27·6	36·5	27·9
Japan	120·7	18·1	3·5	3·0	7·7	23·4
Norway	22·1	5·1	18·4	23·9	34·2	38·6
Switzerland	10·7	5·5	14·4	20·3	20·9	24·3
U.S.S.R.	78·3	95·1	115·7	132·3	154·3	?
United States	776·4	495·1	409·6	571·8	623·5	603·5
Others	54·3	13·6	12·7	15·8	25·7	?
Total	1,866	958	870	1,189	1,398	1,442

United States. Following a sharp decline in the last quarter of 1949, production of zinc in the U.S. was increased in 1950 to the highest level since 1944, a total of 527,764 tons being produced in the first three quarters of the year.

Copper. World production of copper declined by 4% in 1949 in spite of sharp increases in Northern Rhodesia and Canada, the gains being more than offset by losses in Chile, the U.S. and the Belgian Congo. The outputs of the major producing countries and the world totals during the years 1944-49 are shown in Table II.

TABLE II. WORLD MINE PRODUCTION OF COPPER
(thousands of short tons)

	1944	1945	1946	1947	1948	1949
Belgian Congo	182·4	176·6	158·6	166·2	171·4	155·9
Canada	273·5	237·5	184·0	225·9	240·7	263·6
Chile	549·5	492·1	395·5	456·9	494·2	404·5
Cyprus	1·6	—	0·1	14·0	17·4	26·4
Mexico	45·5	68·0	67·3	71·4	65·1	63·1
Peru	35·7	35·2	27·1	24·8	20·0	31·3
N. Rhodesia	248·8	219·7	211·1	217·5	249·7	285·6
South Africa	25·2	26·5	29·8	32·4	32·5	33·3
U.S.S.R.	149?	154?	165?	182?	198?	220?
United States	972·5	772·9	608·7	847·6	834·8	752·8
Yugoslavia	25·0	13·8	35·6	44·7	58·0	37·5
Total	2,780	2,380	2,050	2,460	2,570	2,460

United States. Mine and smelter output in 1949 declined 10%, refinery output 16% and refinery output from domestic ores 19%. Imports increased, and although exports and secondary recovery declined, the supply available for use decreased by 16%. The decrease was partly the result of strikes in the mines and smelting works, and partly the result of the change to a 40-hr. week. In 1950 higher prices and increased demand advanced mine output to 666,943 tons in the first three quarters of the year.

Canada. The increase in Canadian primary copper output shown in 1949 continued in 1950, 173,906 tons being produced in the first seven months; the corresponding refinery figure was 160,872 tons.

Lead. The lead outputs of the chief producing countries are shown in Table III, as reported by the U.S. Bureau of Mines. The countries listed normally produce about 90% of the world total.

United States. The moderate rise in lead output in the U.S. in 1949 carried over into 1950, and mine production was reported to be 357,259 tons up to the end of October.

Canada. The Canadian output of recoverable lead dropped from 167,251 tons in 1948 to 159,775 tons in 1949 and was

TABLE III. WORLD SMELTER PRODUCTION OF LEAD
(thousands of short tons)

	1944	1945	1946	1947	1948	1949
Argentina	21·1	23·3	17·8	22·0	23·7	16·5
Australia	173·1	174·6	154·0	177·6	178·6	204·3
Belgium	8·5	8·0	26·2	44·6	72·4	87·3
Canada	142·6	162·5	165·8	162·0	160·1	146·2
France	2·1	3·0	38·3	38·1	37·8	60·0
Germany	154·2	?	31·9	26·8	54·1	109·5
Italy	?	0·9	15·7	19·5	29·4	29·0
Japan	8·8	13·9	5·4	9·7	11·2	13·9
Mexico	196·5	221·7	151·8	240·1	214·4	233·7
Peru	42·9	44·1	40·2	36·1	38·4	39·7
Spain	34·1	35·1	35·6	37·9	24·2	30·1
U.S.S.R.	50?	44?	53?	69?	83?	99?
United States	464·7	443·5	338·1	441·0	406·7	475·9
Total	1,420	1,230	1,150	1,440	1,490	1,720

103,587 tons up to the end of Aug. 1950. This was a greater decline than appeared, as the 1949 figure includes 18,608 tons from Newfoundland, not previously included.

Manganese. Although manganese production is reported in more than 40 countries, the 8 listed in Table IV account for 85%-90% of the world total, according to the data of the U.S. Bureau of Mines.

TABLE IV. WORLD PRODUCTION OF MANGANESE ORE
(thousands of short tons)

	1944	1945	1946	1947	1948	1949
Brazil	162·0	269·7	164·4	156·7	155·7	?
Chile	48·5	8·2	22·6	21·4	26·0	?
Cuba	284·3	218·5	144·2	55·5	32·0	68·8
Gold Coast	528·6	785·9	857·2	659·8	705·6	?
India	414·7	235·5	283·5	505·2	523·4	608·3
South Africa	117·8	126·2	262·1	317·7	304·7	722·2
U.S.S.R.	508?	2,480?	1,870?	1,980?	?	?
United States	247·6	182·3	143·6	131·6	131·1	126·1
Total	3,140	4,670	4,050	4,300	4,550	4,970

United States. The domestic output declined by about half after 1944, and was about 130,000 tons a year from 1947 to 1949. In 1950 there was some improvement, 109,800 tons being produced in the first three quarters. In 1949 and most of 1950 consumption was low, but imports were kept high, providing significant amounts to add to stocks. Imports from the U.S.S.R. had almost ceased, but there were increases from India, the Union of South Africa and the Gold Coast.

Nickel. World production of nickel, as reported by the U.S. Bureau of Mines, is shown in Table V.

TABLE V. WORLD PRODUCTION OF NICKEL
(short tons)

	1945	1946	1947	1948	1949
Canada	122,565	96,062	118,627	131,075	128,328
Cuba	12,015	12,391	2,220	—	—
Finland	992	662	?	—	—
Japan	717	?	?	—	—
New Caledonia	4,771	3,063	3,687	5,381	3,717
Norway	569	61	—	—	—
South Africa	550	548	583	505	681
U.S.S.R. (est.)	14,800?	22,000?	27,500?	27,500?	25,000?
United States	1,155	352	646	883	790
Total	160,000	135,500	154,000	166,000	161,000

Canada. Production of nickel in Canada amounted to 79,059 tons in the first eight months of 1950.

Sulphur. World production of sulphur increased from 5,380,000 short tons in 1947 to 5,940,000 in 1948, and dropped back to 5,820,000 tons in 1949. This was the first decline since 1943. The United States supplies about 90% of the total, and Italy, with about 3%, is the next largest producer. Production in the United States in 1950 was stepped up to 4,359,446 tons in the first three quarters, and shipments rose to 4,600,790 tons, indicating that the year's output might be a record.

Tin. World tin production was stepped up by 6% in 1949, increases in Malaya and Thailand more than offsetting a 9% loss in Bolivia and smaller losses in China and Indonesia. The 1949 total was the largest since 1941. Outputs of the

major producers are shown in Table VI, as reported by the U.S. Bureau of Mines.

TABLE VI. WORLD PRODUCTION OF TIN
(thousands of short tons)

	1944	1945	1946	1947	1948	1949
Australia	2·9	2·6	2·4	2·7	2·1	2·2
Belgian Congo	19·4	19·1	15·8	16·7	15·3	15·6
Bolivia	43·5	47·6	42·1	37·3	41·8	38·2
China	3·7	1·7	2·8	4·8	5·4	4·7?
Indonesia	7·6	1·2	7·2	17·8	32·2	32·4
Malaya	10·4	3·5	9·4	30·3	50·2	61·5
Nigeria	14	12·6	1·5	10·2	10·3	9·9
Siam	3·7	2·0	1·2	1·5	4·7	8·7
Others	7·8	7·2	6·1	6·8	7·0	7·8
Total	113·0	97·4	88·6	128·2	171·1	181·1

Uranium. The development of the atomic bomb brought about an unprecedented demand for uranium and stimulated the search for uranium ore in every country in which it was known to exist, and in others where the geological conditions were favourable. This search resulted in the discovery of many new deposits and the expansion of the former producing areas, but, so far as was known, the newly discovered deposits were small and comparatively low in grade; because of their number, however, the output, both existing and prospective, was greatly increased. However, for security reasons, no country made public any detailed information on its deposits or production.

While in the better deposits uranium is associated with vanadium and radium, it is also found in small amounts in other combinations. For example, small amounts of uranium were found in the gold ores of South Africa and in the phosphate rock deposits of Florida, and means were being sought of recovering it as a by-product.

In the United States the former vanadium-producing area in the Colorado plateau was extended and its production increased to such a point that in 1950 there were six ore treatment plants. This area had furnished nearly all the output up to that time, but numerous deposits had been reported in other western states. Improvements were made in concentration and recovery processes, increasing the yield and reducing costs. Equipment was expanded at both the Hanford, Washington, and Oak Ridge, Tennessee, plants.

Zinc. World production of zinc in 1949 compared with that of previous years is shown in Table VII.

TABLE VII. WORLD PRODUCTION OF ZINC
(Smelter output thousands of short tons)

	1939	1945	1946	1947	1948	1949
Australia	79·8	93·8	85·4	77·7	91·1	90·7
Belgium	205·1	12·9	95·0	146·7	169·5	194·6
Canada	175·6	183·3	185·7	178·2	196·5	206·0
France	67·3	9·3	33·5	50·7	61·2	66·8
Germany	254·6	?	31·3	22·8	45·0	95·8
Great Britain	58·3	69·5	73·4	76·5	80·6	71·8
Italy	39·0	1·7	17·3	25·1	29·1	29·3
Japan	56·5	20·4	12·4	16·4	23·4	35·6
Mexico	39·0	54·0	46·3	62·5	52·1	59·0
Netherlands	22·4	—	2·2	10·5	15·0	17·2
N. Rhodesia	14·2	17·1	19·2	23·7	24·8	25·6
Norway	50·6	10·2	33·3	38·1	46·3	45·2
Poland	120·0	40·1	62·4	79·1	96·0	?
Spain	14·8	19·1	19·4	21·8	23·4	21·6
United States	507·2	764·6	772·4	802·5	787·8	814·8
Total	1,820	1,400	1,550	1,760	1,865	1,995

The German output was greatly reduced, and of the other important producers, only France, Great Britain and Spain were producing at their prewar rates. However, these losses were more than offset by advances in production outside Europe.

United States. Mine output dropped 6% in 1949, but smelter output gained 4%. Though recoveries from imported ores declined 7%, those from domestic ores rose 10%. Imports advanced slightly and consumption dropped, leaving a substantial balance to add to stocks—the first increase since 1945. Mine production improved in the first half of 1950, and in spite of later declines totalled 500,202 tons up to the end of October. (*See* also COAL; DIAMONDS; GOLD; IRON AND STEEL; PETROLEUM; SILVER.) (G. A. RO.)

MINERALOGY. A new lead-copper mineral from the Mammoth mine, Arizona, was described by J. J. Fahey, E. B. Daggett and S. G. Gordon (*American Mineralogist, 35,* 93-98). The name *wherryite* was assigned to this new mineral in honour of Edgar T. Wherry, professor of plant ecology at the University of Pennsylvania, Philadelphia, and first editor of the *American Mineralogist.* M. A. Peacock and John McAndrew reported on the new natural nickel-lead sulphide, $Ni_3Pb_2S_2$, from Trial Harbour, Tasmania (*ibid, 35,* 425-439). This mineral was sent to them by P. Ramdohr who named it *shandite* after S. J. Shand, Scottish petrologist, who was for a period professor at Columbia university.

C. B. Slawson discussed "Twinning in the Diamond," much of which is of a multiple character (*ibid, 35,* 193-206), and C. B. Slawson and J. A. Kohn described the "Maximum Hardness Vectors in the Diamond" (*Industrial Diamond Review, 10,* 168-172). "The Mining and Heat Treatment of Zircons" was reported by W. C. Buckingham (*Journal of Gemmology,* vol. ii, pp. 177-187). In an extended article R. Keith Mitchel discussed the "Cleavage and Structure of Gem Minerals" (*ibid.,* vol. ii, pp. 237-274). The "Diagnostic Importance of Inclusions in Gem Stones" by Edward Gübelin, with 48 illustrations, was a valuable contribution (*ibid.,* vol. ii, pp. 281-303). "Exploring the World of Gems" by W. F. Foshag (*National Geographic Magazine,* vol. xcviii, pp. 779-810), with 34 illustrations, 24 in natural colours, was of great popular interest.

A *Roman Book on Precious Stones* by S. H. Ball became available during the year. The book was based upon an English modernization of Pliny's 37th book of the *History of the World,* which was a treatise on gems. The life of Pliny, his standing as a mineralogist and the status of gemmology and jewellery in his time were discussed by Ball. A section of the book contained Ball's extensive notes which explained, amplified or corrected many of Pliny's statements and illusions. The famous translation of Georg Agricola's *De re metallica* (1556) by Herbert C. Hoover, former president of the United States, and Lou H. Hoover, which was published in 1912 and had long been out of print, was issued in a new edition. This was a valuable history of the scientific development up to the middle 16th century and served as a source book in mineralogy, geology and mining and mechanical engineering. E. E. Walhstrom's *Introduction to Theoretical Igneous Petrology* stressed the application of physical chemistry to rocks. *Einfuehrungen in die Mineralogie (Kristallographie und Petrologie)* by C. W. Correns (Berlin) was designed primarily for advanced students and specialists. Paul Ramdohr's *Die Erzmineralien und Ihre Verwachsungen* (Berlin) was a comprehensive treatise on ore minerals.

The Sept.-Oct. 1950 number of the *American Mineralogist,* pp. 615-958, was dedicated to Esper S. Larsen, Jr. A copy was presented to him at the annual meeting of the Mineralogical Society of America in Washington, D.C., on Nov. 16, 1950, in advance of official publication. Larsen was professor of petrology at Harvard university from 1923 until his retirement in 1949. (*See* also MINERAL AND METAL PRODUCTION.) (E. H. KR.)

MISSIONS, FOREIGN RELIGIOUS. The Christian missionary enterprise was dominated in 1950 by events in the far east. The importance of the far east was recognized by the World Council of Churches (*q.v.*) and the International Missionary council in the joint appointment of

an East Asian secretary, Dr. Rajah Manikam of India. He was to be a roving ambassador amongst the various Christian churches giving them advice and leadership.

Some of the lines of Christian activity in the far east were formulated at the Bangkok conference of Dec. 3-11, 1949, and published in Feb. 1950. They included: (1) a deliberate effort to enlist the entire membership of the churches for evangelism, that is, to train congregations, small groups, youth groups and selected individuals for this task, and to secure the whole-hearted service of every minister of the church in this part of his duty: (2) the training of lay members for Christian obedience in the particular conditions of the several vocations; (3) the early completion of the process by which the responsibility of the missionary task in every place would be transferred to the church in that place; (4) a much more determined effort to distribute the Bible and Christian literature throughout the whole of eastern Asia.

China. The number of missionaries declined considerably, the figure for Protestant missions being 1,830, of whom 700 belonged to the China Inland mission. It was reported that the Chinese Communist government informed a Christian deputation that it was the government's policy to allow missionaries to stay only as long as their present passports remained valid. The last two English-born bishops of the Anglican Church in China resigned, leaving only Bishop R. O. Hall of Hong Kong as a "foreign" bishop amongst 12 Chinese colleagues. This house of bishops clarified their attitude towards the new political and social conditions in China in a statement which said:

> (1) We acknowledge that the church is not only unable to compromise with imperialism, feudalism or bureaucratic capitalism, but takes issue with them as being fundamentally in opposition to the faith of the church. (2) We greatly rejoice in the liberation which has come to the people of our nation and with the utmost sincerity uphold that freedom of religious faith which is guaranteed in the "common political principles." (3) Our church has already made real achievements along the lines of becoming self-governing, self-supporting and self-propagating; we are now determined along with all our fellow Christians to press forward together to achievement of our goal in the shortest possible time.

The National Christian Council of China was active in arranging special visiting teams for consultation and fellowship amongst scattered Christian groups, and in Shanghai conferences were held of representatives of Christian schools and hospitals. In consequence of the restrictions on the travel of missionaries in the interior of China many small churches ceased to exist, but in the cities crowded congregations were reported together with much faithfulness on the part of Chinese Christians. Missions continued their policy of handing over property to Chinese authorities. Student evangelism proceeded in government universities, and the group of 13 Christian colleges had large enrolments of students.

Formosa. A remarkable movement towards Christianity, which began in the latter days of World War II, in the eastern mountainous areas, made progress with the tribesmen who asked for missionary leadership and for the publication of the Scriptures in their own dialects.

Korea. At the outbreak of fighting in Korea 200 American missionaries were evacuated, mainly to Japan, and the small group of British missionaries were compelled to leave the Seoul district although Bishop A. C. Cooper stayed in the city during the occupation. One Roman Catholic bishop was imprisoned. Church and mission property was used for military purposes by the invading forces.

Japan. The new International Christian university in Japan, at Mitaka, 17 mi. from Tokio, made progress towards the establishment of its endowment. Funds were collected both in Japan and the U.S. and 12 mission boards made grants totalling over $1 million. The international character of the new university would be seen both in the enrolment of students and in the recruitment of staff, half of whom were to be Japanese and half of other nationalities.

Indonesia. An organization which was likely to strengthen Christian forces in the far east was the foundation on May 28 of a National Council of Churches of Indonesia. There in Moslem-dominated areas Christianity extended its influence, especially in the central highlands of Sumatra.

India. The constitution of the Republic of India, proclaimed on Jan. 26, accorded to "every religious denomination or any section thereof" the right "to manage its own affairs, to own and acquire immovable property and to administer such property in accordance with the law." The right "freely to profess, practise and propagate religion" was acknowledged subject to "public order, morality and health"—a significant statement for the Christian Church in India.

In north India 1950 was the second year of a five-year plan by the United Church of North India (Congregational and Presbyterian) to secure 10,000 new communicants, 100 new churches, 50 new church buildings, 1,000 trained lay leaders and the adoption of daily Bible readings in 10,000 homes.

Pakistan. A recognition of the place of Christianity in Pakistan was the appointment by the government to the Constituent Assembly of Rallia Ram, president of the Christian Council of India and Pakistan.

In Pakistan the Technical Services association, founded by the Foreign Missions Conference of North America, continued to bring succour and fresh opportunities for a livelihood to the 350,000 landless Christians who formerly were day labourers for Hindu and Sikh landowners in the west Punjab: they had been stranded when these lands were parcelled out to dispossessed smallholders from the east Punjab. Co-operative industries in tanning, pottery, soap making and fuel marketing were organized, and under one public works contract a thousand were employed in canal digging.

Africa. The African continent continued to be of major importance for the mission of the Christian Church. A recognition of this fact was the enquiry conducted during 1950 by Bishop Stephen Neill into what was the theological training of African Christian ministers and what were the resources for the education and training of the younger leaders of the Christian Churches. The demand for education in all areas found the staffs of Christian schools heavily pressed, and the demand for baptism was also heavy in both east and west Africa. In the Gold Coast and Nigeria religious departments were inaugurated in the government-founded universities.

In South Africa the policy of *apartheid* made all missions and churches aware of the sinister possibilities of racial discrimination's spreading to other territories. Churches in the Union, in opposition to the official policy, expounded the value of *eendrag* (co-operation) and sought to prevent the worst effects of discrimination within the church itself.

General. The marked feature of 1950 in the missionary enterprise of the Christian Churches was the growth of consultation and co-operation between what in time-honoured phraseology were known as the "older" and "younger" churches, a distinction which was gradually ceasing to have its older significance.

At its meetings at Whitby, Ontario, Canada, the International Missionary council laid stress on the partnership between east and west and called on its member councils to watch three crisis points for the church and its mission: (1) the witness of the church in relation to communism; (2) the freedom and integrity of evangelical Christianity in countries dominated by political Roman Catholicism; (3) the threat to the church arising from new religious syncretism often associated with some aspect of nationalism.

The year 1950 saw the completion of the 11th year of the

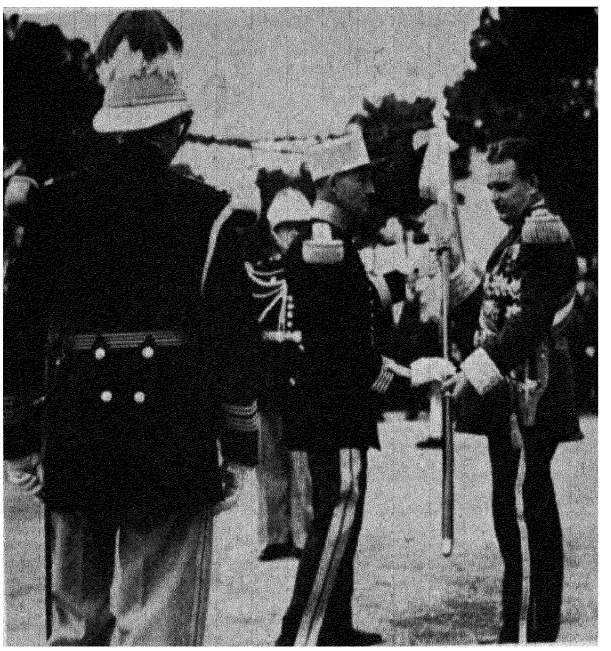
remarkable aid provided mainly from the United States and Great Britain for orphaned missions of Germany and France which were not supported from their home base. Over $8 million had been raised during that period; and in 1950, $194,000 was secured by the International Missionary council chiefly for German missions which were in future expected to provide staffs as well as resources for their overseas work. (C. N.)

MOCH, JULES SALVADOR, French statesman (b. Paris, March 15, 1893). He was educated at the Ecole Polytechnique, served in World War I as an officer of the engineers, and after the war was director of services for industrial and agricultural restitution in Germany. From 1920 he worked in private industrial enterprises. Entering active politics, he was elected in 1928 at Valence, Drôme, a Socialist member of the Chamber of Deputies. Re-elected in 1932, he lost his seat in 1936 but in a by-election the following year became a member for Sète, Hérault. He joined the second Blum cabinet (March-April 1938) as minister of public works. At the start of World War II he served with the French navy. On July 10, 1940, at Vichy, he was one of the 80 deputies who voted against according full powers to Marshal Pétain. Soon afterwards he was arrested, but was released in March 1941. He became active in the *Combat* resistance movement and in April 1943 joined General de Gaulle in London. He served with Fighting French naval forces and took part in the landing in Provence (Aug. 16, 1944). He was elected, for the *département* of Hérault, to both Constituent Assemblies (Oct. 1945 and June 1946), to the National Assembly (Nov. 1946) and was a member of 12 postwar cabinets. In Nov. 1945 he became minister of public works and transport and in Nov. 1947 minister of the interior. Moch was prime minister for three days in Oct. 1949 and until Feb. 4, 1950, deputy prime minister and minister of the interior. In the Pleven cabinet formed on July 12, 1950, he received the portfolio of national defence. In October he attended a meeting of the defence ministers of the North Atlantic treaty organization in Washington, at which he opposed the creation of German army divisions in the proposed western European army.

MONACO. A sovereign principality on the Mediterranean coast, 9 mi. E. of Nice, bounded on all land sides by the French *département* of Alpes Maritimes. Area: 369·9 ac. Pop. (1946 census): 19,242, including 1,975 Monacans, 10,522 French and 6,745 other foreigners. Ruler, Prince Rainier III; minister of state, Pierre Voizard.

History. Strong resentment of what was regarded as a persistent French attempt to " whittle away " the independence of Monaco led to the resignation in Dec. 1949 of all 18 members of the National Council. The main criticism was directed against Jacques Rueff, minister of state, who was accused of " half-heartedness " in his handling of negotiations to secure a revision of the 1945 conventions between France and Monaco (these had brought the principality into line with the financial control imposed in France). On Jan. 8 elections took place at which, out of the 922 male electors (the women of Monaco having no parliamentary vote), 736 went to the poll. Rejecting both *rouge* and *noir*, they backed by the moderate National coalition, led by Louis Aureglia, which won 11 seats outright. The remaining seven seats were filled at the second round on Jan. 15. The only Communist candidate was again beaten and so were right-wing Independents. On May 12 the offices of the Communist party in Monaco were raided and closed down by the police.

Prince Rainier III was acclaimed by his subjects and thousands of foreign tourists at the official celebration of his ascending the throne on April 11, the national day of the principality. Special envoys of foreign powers participated in ceremonies. Three destroyers, representing the British, French and U.S. navies, decorated for the occasion, were anchored in Monaco's tiny port. On May 2 Prince Rainier paid an official visit to Vincent Auriol, president of the French republic, in Paris. On July 24 Pierre Voizard succeeded Jacques Rueff as minister of state.



Prince Rainier III presenting colours to the colonel of the Monacan army during celebrations to mark the prince's accession to the throne, April 1950.

Education. Schools (1949-50): primary 9, pupils 1,494, teachers 85; secondary 3, pupils 312, teachers 38.

Finance. Budget (million francs): (1949-50 actual) revenue 878·1, expenditure 935·3; (1950-51 est.) revenue 924·4, expenditure 884·8.

MONGOLIA. Chronologically the first Soviet-dominated people's republic (founded on July 11, 1921), Mongolia is bounded N. by the Asiatic part of the Russian S.F.S.R. and E., S. and W. by China. Area (official figure): 606,000 sq.mi. Pop.: no census has ever been taken and estimates vary from 850,000 (Soviet, 1941) to 2,078,000 (Chinese, 1945). Language: Mongol. Religion: Lama-Buddhism. Capital: Ulan Bator, formerly Urga (pop., 1941 est., 70,000). Chairman of the presidium of the Little Khural, Bumatsende; chairman of the council of ministers and commander in chief, Marshal Choibalsan.

History. On the 29th anniversary of the foundation of the Mongol People's Revolutionary (Communist) party on July 11, 1950, Damba, a secretary of its central committee, said at Ulan Bator that the international position of Mongolia was strengthened by the fact that Mongolia had established diplomatic relations with all other people's democracies. For a quarter of a century " independent " Mongolia exchanged diplomatic representatives only with the U.S.S.R. Although Nationalist China recognized the independence of Mongolia on Jan. 5, 1946, Sino-Mongolian diplomatic relations were established by Communist China only on July 9, 1950, when Chi Ya-tai, first Chinese ambassador, arrived at Ulan Bator. During April the Mongolian ambassador to Moscow exchanged letters with his colleagues there of Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Rumania by which diplomatic relations between Mongolia and other people's democracies were established. Up to the end of the year, however, no envoys had been exchanged. In June Shirendyb, chairman of the

National Peace committee and rector of the Mongolian state university, announced that 686,782 persons had signed the "Stockholm appeal." In December it was announced by U.N. headquarters that two Mongolian cavalry divisions were co-operating in Korea with the Chinese.

According to official figures published in 1946, and attributed to the year 1941, Mongolia had a total of 27·5 million head of livestock, including 15·9 million sheep, 5·5 million goats, 2·8 million cattle, 2·6 million horses and 700,000 camels. As the target of 50 million head set for 1945 had never been approached, the five-year plan adopted in 1947 fixed for 1952 the target of 31 million head of livestock, which was still the basis of Mongolian economy. In a report to the central committee of the M.P.R.P., Choibalsan said in February that during 1949 livestock had increased by 1,345,822 head, including 1,315,900 raised by individual *arats* or peasants. At the same time the State Planning commission announced that in 1949 the total livestock had increased by 6·5% in comparison with 1948. This would suggest that in Jan. 1950 the livestock numbered only 22,051,000 head and would not substantiate the claims of success in livestock breeding made in Choibalsan's report. Essential to the successful development of livestock breeding was the establishment of a firm fodder base. During the year experimental sowing of fodder grasses was extended. At the same time, according to *Izvestia* (Feb. 28), it was planned to irrigate during the year from 5 million to 6 million ha. of desert.

Unfavourable soil and climate determined a small-scale agriculture. In 1948 the area under cultivation was estimated at 750,000 ha. and the 1949 increase was reported to be 7·4%, the main crops being oats, millet, spring rye, wheat and barley. The combined industrial plant at Ulan Bator in 1950 produced 100 different articles as against 10 in 1934. No figures were published of coal production at Nalaikha, linked by a narrow-gauge railway with Ulan Bator, but it was estimated that the 1950 extraction amounted to about 1 million tons.

On April 27 a decree of the presidium of the Little Khural adopted a new national anthem with words by Ts. Damdinsuren and music by L. Murdorzhi and B. Damdinsuren.

Education. In 1950 there were 368 primary, 32 seven-year and 11 secondary schools with a total of 71,000 pupils. There were also 14 vocational secondary schools with a total of 2,800 pupils. From the Mongolian state university 80 physicians, veterinary surgeons and teachers graduated during the year. Illiteracy (1949): 55·4%.

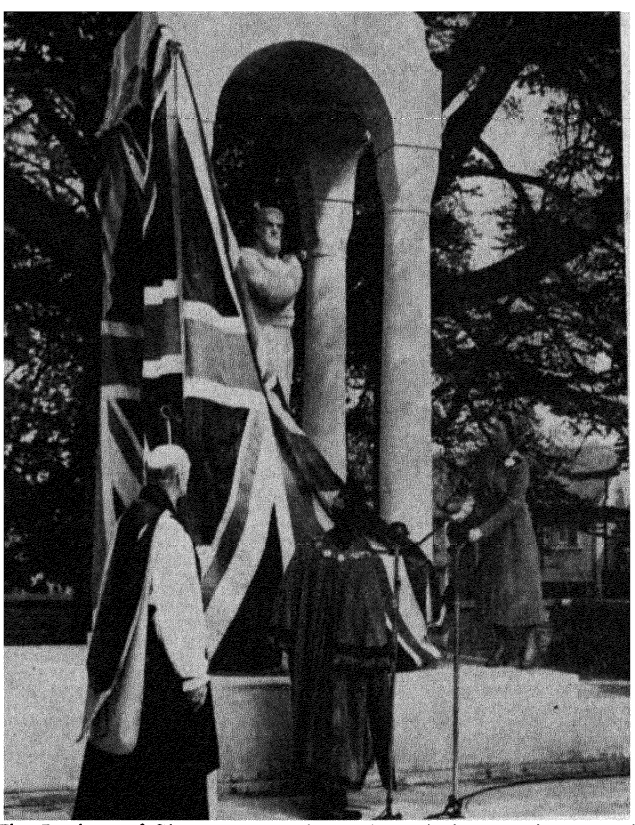
Finance. Budget (1950 est.): balanced around 300 million tughriks. The Mongolian *tughrik*, divided into 100 *munghe*, was at parity with the rouble. The theoretical exchange rate, therefore, was (as from March 1, 1950): £1 = M.T. 11,20 and U.S. $1 = M.T. 4,00. (K. SM.)

MONNET, JEAN, French economist and diplomat (b. Cognac, Charente, 1888). During World War I he was French representative on the Interallied Maritime commission and from 1919 to 1923 deputy secretary general of the League of Nations. For the next two years he concentrated on re-organizing the family brandy business and in 1925 became European partner of a New York investment bank. In 1933 he became financial adviser to China. At the start of World War II he was made chairman of the Franco-British Co-ordination committee. In June 1940 it was he who suggested to Winston Churchill the idea of the Franco-British union. After the capitulation of France Monnet left for Washington where he was appointed to the British Supply council. Early in 1943 he moved to Algiers where he became in May a member of the newly organized French Committee of National Liberation. On the re-organization of the F.C.N.L. in April 1944 under General Charles de Gaulle, he became commissioner on special mission in the United States. After the liberation of France he headed a commission preparing a comprehensive plan for the reconstruction and modernization of the French economy during the years 1947-52. By Nov. 1946 the main features of the Monnet plan had been completed; on Jan. 11, 1947, it was officially adopted by the French government for execution and Monnet was appointed commissioner general of the plan. When on May 9, 1950, the French government launched the Schuman plan (*see* EUROPEAN COAL AND STEEL POOL), Monnet, who had played an outstanding part in its elaboration, was chosen leader of the French delegation. In connection with the plan he visited London on May 16 and Bonn on May 23.

MONTSERRAT: *see* LEEWARD ISLANDS.

MONUMENTS AND MEMORIALS. During 1950 memorials were dedicated in St. George's church, Chatham naval barracks, to the company of the armed merchant cruiser "Jervis Bay," sunk in action in 1940; and to those killed in the cruiser "London" in the Yangtze river in 1949. Ten windows and a memorial book to officers and men of the Chatham division killed in World War II were unveiled by Princess Elizabeth on Oct. 29. The Reconnaisance corps book of remembrance was dedicated in the church of St. Martin-in-the-Fields, London, on April 30. On June 3 Field Marshal Lord Alanbrooke, the Master Gunner, opened 24 houses for disabled ex-servicemen and war widows at Headstone Lane, Middlesex, as part of the Royal Artillery memorial. Memorials to Commonwealth and Indian officers and men were dedicated at Sandhurst in October.

A monument commemorating the 51st (Highland) division's rearguard actions in France in 1940 was unveiled at St. Valery-en-Caux; a font and communion table were dedicated at Oosterbeek, Holland, in memory of the assault of the 1st Airborne division at Arnhem, 1944; and a colonnade at Bastogne, Belgium, commemorated U.S. dead of the Ardennes battle, 1944-45. On May 11 the Burma roll of honour was formally lodged in Westminster abbey until a war memorial chapel was prepared for its inception in



The Duchess of Gloucester unveiling a heroes' shrine and memorial in Manor Park, Aldershot, May 1950.

Rangoon cathedral. In April a memorial to Sir Fabian Arthur Goulstone Ware (1869-1949), founder of the Imperial War Graves commission, was placed in the abbey.

The civil defence windows in Bristol cathedral were unveiled by Princess Elizabeth on March 3 and the Metropolitan police memorial book by the King in Westminster abbey on July 27; the Nurses' memorial chapel in the abbey was opened by the Queen on Nov. 2. On May 5 the Duchess of Gloucester unveiled the Aldershot memorial shrine.

King George's fields, purchased by the national memorial fund to King George V (1865-1936) were opened at Bangor, Caernarvonshire, at Llandebi, Carmarthenshire, and at Gorton, Lancashire. Memorials to the first Earl Baldwin of Bewdley (1867-1947) were inaugurated at Astley, Worcestershire, by Winston Churchill on May 20, and at Aix-les-Bains, France. Mr. Churchill also unveiled a statue of the first Earl of Oxford and Asquith (1852-1928), British prime minister, 1908-16, at the House of Commons on Dec. 6. Plaques set up by the London County council included those marking the residences of Thomas Rowlandson (1756-1827), painter, in John Adam street, Adelphi; and of Sir Henry Irving (1838-1905), actor-manager, in Grafton street, Westminster. Plaques were also set up in memory of Sir Henry Walford Davies (1869-1941), Master of the King's Musick, 1934-41, at his native Oswestry, Shropshire; and at Rugby school to William Temple (1881-1944), archbishop of Canterbury, 1942-44, a pupil and governor of the school. A window in Westminster abbey was dedicated to the memory of Sir Charles Algernon Parsons (1845-1931), inventor of the steam turbine. Two rooms were opened at the India league offices, London, as a memorial museum to Mahatma Gandhi (1869-1948). In Oslo, in June, Mrs. Eleanor Roosevelt unveiled a statue of Franklin Delano Roosevelt (1882-1945), president of the United States, 1932-45.

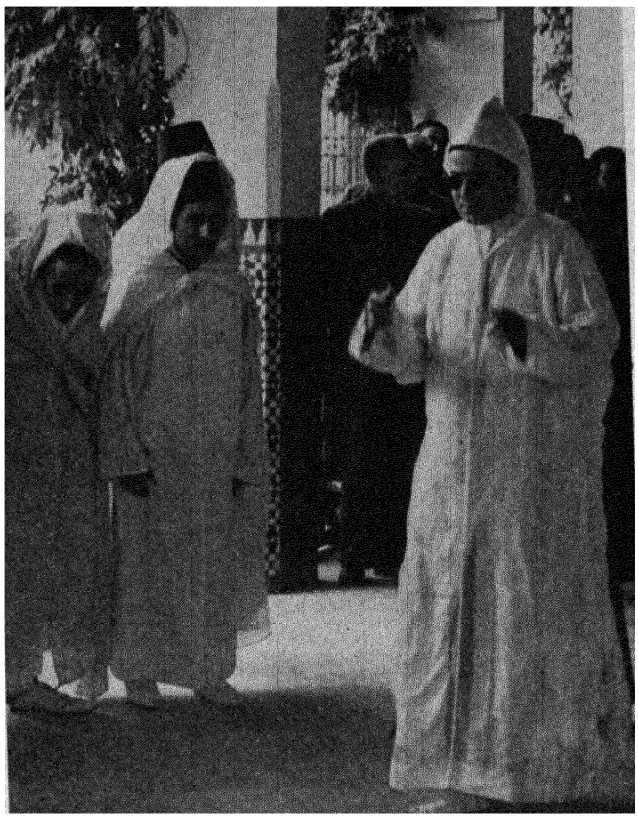
MOROCCO. Sultanate of northwest Africa, with both Mediterranean and Atlantic coastlines, divided into three unequal parts, the French protectorate described from 1947 as potentially an associated state of the French Union, the Spanish protectorate consisting of a northern and a southern zone (*see* SPANISH COLONIAL EMPIRE) and the international zone of Tangier (*q.v.*). Areas and populations :

	Area (sq.mi.)	Population (1936 census)	Population (1947 census)
French protectorate . .	153,870	6,245,222	8,224,997
Spanish protectorate . .	18,372	1,047,000*	1,328,000†
Tangier	232	95,000*	104,000†

* Mid-1937 estimates. † Mid-1947 estimates.

In the French protectorate the population was estimated in 1949 at 9,200,000. Arabs and Berbers constitute the overwhelming majority of the population; they are Moslem and speak Arabic (64%) or Berber (22%) or are bilingual (14%). The 1947 census revealed a European population of 325,000 including 266,133 French. The Jewish community numbered 225,000. Chief towns (pop., 1947 census): Rabat (cap., 161,416); Casablanca (551,222); Marrakesh (238,277); Fez (200,946); Meknès (159,811). Ruler, Sultan Mohammed ben Yussef III; grand vizier, Si Mohammed el Mokhri; French resident general, General Alphonse Juin.

History. Morocco's unbroken prosperity made possible a balanced budget and in 1950 the financing of public works to the extent of Fr. 22,617 million. The index of mining production rose from 100 (1938) to 225 (1950). Exploitation of manganese and cobalt opened up new resources. Exports increased to Great Britain, the Benelux countries and especially Western Germany, but the adverse trade balance had been steadily worsening during the preceding years (Fr. 15,000 million deficit in 1947, 37,000 million in 1948 and 50,000 in 1949).



The Sultan of Morocco entering the Paris mosque, during his state visit to France in Oct. 1950.

From 1947 Morocco could claim the status of an associated state if it indicated willingness to join in the French Union; but the Nationalist Istiqlal party, led by Si Allal el Fassi and Ahmed Balafredj, which regarded the sultan as champion of its ambitions, was opposed to this and sought the country's independence. In the course of the December session of the Native section of the council of government, when charged with examining the budget, the elected councillors belonging to the Istiqlal party launched a bitter attack on the work of the protectorate. General Alphonse Juin, the French resident general, who was hostile to reforms in north Africa, expelled them from the assembly (Dec. 12).

During his stay in France (Oct.-Nov.), where he was warmly welcomed by the people, the sultan entered into negotiations with the government for the revision of the treaty of protectorate. He considered inadequate the reforms proposed and in a cabinet communiqué noted the points of disagreement (Oct. 22). A joint commission was to continue negotiations—but at Rabat, which would make success more elusive, owing to the censorship and local pressures.

Agriculture. Main crops (1949, '000 metric tons): wheat 638; barley 1,368·8; oats 39·1; maize 399·9; sorghum (millet) 43·4; wine (1950 est.) 500,000 hl. Livestock (1948, '000 head): cattle 1,449; sheep 8,474; goats 6,009; pigs 97; horses 155; asses 555; mules 141; camels 165.

Industry. (1949) Fuel and power: anthracite 346,500 metric tons (1950, six months; 205,400); electricity 333 million kwh.; crude oil 17,479 metric tons (1950, six months: 17,824). Raw materials ('000 metric tons): phosphate rock 3,620 (1950, six months: 2,317); iron ore 372; manganese 228·4 (1950, six months: 149); cobalt 2. Cement (1949) 266,100 metric tons. Rugs (1949) 81,900 sq.metres.

Foreign Trade. (Million francs, 1949; 1950, six months, in brackets) import 103,320 (55,211); export 53,515·6 (31,188·7).

Transport and Communications. Railways (1948) 2,111 km. Roads (1948): 9,181 km.; tracks 32,000 km. Motor vehicles licensed (Dec. 1948): cars 24,470, commercial 19,956. Ships entered (1949, Casablanca) 6,030; cargo (1949, all ports, '000 metric tons): unloaded 2,125; loaded 5,449. Air transport (1949): aircraft landed 5,603; passengers carried: arrivals 65,406; departures 69,520; cargo carried 7,059 metric tons;

mail 269 metric tons. Telephone subscribers (May 1949): 29,500.
Finance. Budget (1951 est.): ordinary balanced at Fr. 37,783 million; extraordinary (equipment) Fr. 22,617 million. Monetary unit: Moroccan franc=metropolitan franc.
See R. Landau, *Invitation to Morocco* (London, 1950). (C. A. J.)

MOSCOW. Capital of the Union of Soviet Socialist Republics and of the Russian Soviet Federated Socialist republic and the third largest city of the world. Area (1939): 110·1 sq.mi. Pop.: (1939 census) 4,137,018, (1950 est.) 7,000,000.

The skyline of Moscow, which for nearly five centuries had been dominated by the Kremlin—now the seat of the Soviet government—underwent a spectacular change during 1950. Designed to embody the greatness and the beauty of the Stalin age, eight modern skyscrapers were in varying stages of erection, and it was hoped to complete them all by 1952. Four of them, including a 26-storey luxury hotel of 1,000 suites and 246 flats, were going up along the Dorogomilovskaya Moscow river embankment, three were situated on the Sadovoye ring road and the eighth, the extensive new university building, in the Lenin hills. The tallest of them was a 32-storey pillar-shaped administrative building which was being erected on Zaradye; a 20-storey structure on Smolensk square was to house a number of Soviet institutions; while a second hotel, of 17 storeys, on Kalanchevskaya street, would cater for travellers using the Kazan, Leningrad and Yaroslavl main line stations.

The Kremlin's battlemented walls and mediaeval turrets also had a "face lift," the first major one for 80 years. All 19 towers, including the Spasskaya, Senatskaya, Troitskaya and Borovitskaya, especially distinguished by their beauty, assumed their former fine appearance.

In the work of restoration more than 100,000 coloured glass tiles, corresponding in form and colour to the ancient tiles, were used to cover the tops of the towers. All the missing white stone gargoyles, allegorical statues and obelisks were restored.

Another notable architectural event was the removal in August of the Pushkin monument, weighing 70 tons, from Tverskoy boulevard to Strastnaya (now Pushkin) square—a distance of only 100 yd. but actually to the site it should have occupied 70 years ago. The famous Bolshoy theatre, which still staged the best ballet in the world, had also undergone major repairs. The stucco mouldings of its imposing façades were restored and both the stage and its massive ceiling were renovated.



The first section of the great belt line of the Moscow metro was opened in Jan. 1, 1950. Above is shown a platform of the Kaluzhskaya station.

May 15 was the 15th anniversary of the opening to traffic of the Moscow underground railway (called *metropoliten*). The length of the track had nearly quadrupled since 1935 and the number of stations went up from 13 to 35. Whereas 15 years previously underground trains transported 177,000 passengers daily, in 1950 the figure exceeded 1,700,000. A 12½ mi.-long "great circular" line, which would serve 18 districts of the capital, was under construction and was to be completed in 1952.

In January Nikita S. Khrushchev (*q.v.*) succeeded G. M. Popov as secretary of the Moscow city committee of the All-Union Communist party. (R. Js.; X.)

Education. It was announced on Sept. 1 that in all the schools of the capital there were 629,000 pupils, 16,000 more than the previous year.
Finance. Budget (1950) balanced at Rb. 3,504·8 million.

MOTION PICTURES: *see* CINEMA.

MOTOR-BOAT RACING. Motor-boat racing during 1950 was dominated by the performance of an outstanding boat which set a new world speed record and took international racing honours. This was the unlimited class hydroplane "Slo-Mo-Shun IV," designed by Ted Jones and built by Anchor Jensen, both of Seattle, Washington, U.S., and powered, like most unlimited hydroplanes, with a 1,710-cu.in. Allison aircraft engine.

"Slo-Mo-Shun IV," built late in 1949, made her first bid for fame on June 26, 1950, on Lake Washington in Seattle, in official speed trials run by the American Power Boat association. Driven by her designer, Ted Jones, she ran the required two one-mile record heats at an average speed of 160·32 m.p.h. The old record was 141·74 m.p.h., made 11 years earlier by Sir Malcolm Campbell, driving "Blue Bird II" in England.

The 21st Harmsworth trophy race for the international unlimited speedboat championship was run at Detroit, Michigan, on Sept. 2. Driven by Lou Fageol, "Slo-Mo-Shun IV" won it rather easily, and her average speed for the race, of 100·68 m.p.h., made it the first 100 m.p.h. boat race in history.

"Slo-Mo-Shun IV" was not entered in the President's cup at Washington, D.C., Sept. 17, which was won by the new "Miss Pepsi," driven by Chuck Thompson and powered with two Allison engines. Though a disqualification had spoiled her chances for the Silver cup, "Miss Pepsi" had set a new five-mile lap record of 107·65 m.p.h. in that event. (W. H. TR.)

MOTOR CYCLE AND CYCLE INDUSTRY. The main feature of 1950 in this industry continued to be its contribution to Great Britain's overseas trade. The increases in the total value of this trade in the first six months of the year (reaching £15,710,022 as against £15,530,811 in the six months ended June 30, 1949) were sustained in later months. Great Britain was the world's largest exporter of motor cycles, bicycles, parts and tyres.

The number of bicycles imported by India in Sept. 1950 rose to the high level of 21,964, following the low buying figures which had prevailed since July 1949. Consistent buyers of British bicycles in 1950 included Pakistan, Malaya, British West Africa, the Irish republic and Brazil.

The number of motor cycles made in Great Britain in the 12 months ended Aug. 1950 was 165,764. Exports amounted to 71,338, valued at £6,606,058, of which 7,975, valued at £840,428, were sent to the United States.

Australia remained the best overseas market for British motor cycles, followed by the U.S., Canada and Switzerland. Substantial increases in motor cycle exports to the U.S. and Canada may be attributed, in part, to the first British car, motor cycle and bicycle show held in New York in April.

The customary London show, organized by the British Cycle and Motor Cycle Manufacturers' and Traders' union, was not held in 1950. Competition from Germany and Japan was limited and did not affect the trade of British makers. A small quantity of lightweight cycle parts was imported from France and Italy.

Production of British bicycles during 1950 was at the rate of about 280,000 a month and of motor cycles at about 14,750 a month. At home, retail prices of complete bicycles and motor cycles were stable, despite increases in prices of raw materials and consequently of certain components, notably tyres and saddles. Except for a few specialized types, supplies of bicycles and motor cycles for the home market were good.

The trend of postwar cycle design towards lighter machines and easier cycling was continued in 1950. Frame tubing incorporating chrome molybdenum or manganese alloys, to give additional strength and lower weights, was adopted on a wider range of bicycles, including some comparatively inexpensive models. Another leading company began to link tubes by electric-resistance welding on one of its lightweight cycle frames. Electronic welding eliminated the use of cast or pressed lugs and produced clean, flush joints which required little treatment before enamelling. Hub gears were now fitted to the majority of standard bicycles sold in Britain. During 1950, there was a further tendency to increase the number of gears available from three to four. Coloured frame finishes became more usual than black on new bicycles.

The popularity of the two-stroke motor cycle for business use increased still further and contributed greatly to the total of 525,000 motor-cycle licences taken out in Great Britain during the early part of 1950. The figures for the latter part of the year, when published, were expected to show a considerable increase in this total, which was the highest for over 20 years.

One of the noteworthy phenomena of 1950 was the great number of auxiliary engines for bicycles in use. No fewer than ten firms were offering engine units on the British market, and one leading maker reported an output of over 1,000 units a week. It was nearly 30 years since auxiliary engines had last interested the British public. The postwar revival arose in Italy and France and in 1949-50 spread to Britain. The capacity of two-stroke units ranged from 25 c.c. to 49 c.c.; friction (on tyres), chain and belt-drive models were available. Mileage per gallon ranged up to 240, while maximum speed was about 25 m.p.h. (H. B.)

MOTOR CYCLING. For the third successive year Great Britain gained the premier award in the international six days' trial. Held in Wales, the trial was so severe that of the 213 competitors only 38 were unpenalized, among them being the British trophy team, F. M. Rist, captain (B.S.A.), P. H. Alves (Triumph), C. M. Ray (Ariel), W. J. Stocker (Royal Enfield) and B. H. M. Viney (A.J.S.). The Austrian and Italian teams both suffered early retirements. In the secondary silver vase contest, in which Ireland, Italy, the Netherlands and Sweden were also represented, the winning British team alone lost no marks. British riders won two of the five individual world road racing championships: 350 c.c., A. R. Foster (Velocette); sidecar, E. S. Oliver (Norton). The Italians B. Ruffo (Mondial), D. Ambrosini (Benelli) and U. Masetti (Gilera) won the 125 c.c., 250 c.c. and 500 c.c. titles. In the separate manufacturers' championships, Norton won the 500 c.c. and sidecar classes, Velocette the 350 c.c. class and Benelli and Mondial the 250 c.c. and 125 c.c. classes respectively.

Following his 1948 successes in the amateur Clubman's Tourist Trophy and Manx Grand Prix races, G. E. Duke (Norton) won the senior Isle of Man T.T. at his first attempt at a record speed of 92·27 m.p.h. A. J. Bell (Norton) won the Junior T.T. and D. Ambrosini (Benelli) the Lightweight. The senior Manx Grand Prix was won by P. Romaine (Norton) and the junior by D. G. Crossley (A.J.S.).

Class winners in international races which, with the T.T., comprised the championship series, were: 500 c.c., U. Masetti, Belgian and Dutch Grands Prix; R. L. Graham (A.J.S.), Swiss; G. E. Duke, Ulster and Italian: 350 c.c., A. R. Foster, Belgian, Dutch and Ulster; R. L. Graham, Swiss; G. E. Duke, Italian: 250 c.c., D. Ambrosini, Swiss and Italian: M. Cann (Guzzi), Ulster: 125 c.c., B. Ruffo, Dutch; C. Ubbiali (Mondial), Ulster; G. Leoni (Mondial), Italian; sidecar, E. S. Oliver, Belgian, Swiss and Italian. In the U.S. British machines (3 Nortons and a B.S.A. third) took the first four places in the premier speed event, the 200 mi. race at Daytona. (C. Q.)

MOTOR INDUSTRY. The 12 months which began with devaluation and ended with rearmament marked an important stage in the development of the British motor industry: it had become by the end of 1950 the largest exporter of motor cars and commercial vehicles in the world. In spite of the opinion that the end of the seller's market would bring a swift decline and that the immediate postwar years were an exceptional period which could not long continue, total production and the proportion of it that was exported continued to grow. The rising costs of labour and raw materials (particularly since devaluation) were absorbed, though not without difficulty, and a solid demand for certain types of British car was established in the hardest of all markets, the U.S. and Canada. Many circumstances contributed to these continuing successes: the American recession of early 1949 did not turn into a slump; dollar shortage removed American competition from many important markets; competition from continental producers was blunted by rising costs and the effect of devaluation on the prices of British products; and the looming prospect of rearmament stimulated the demand for consumer goods in many countries, not least the U.S.

Perhaps the very successes of the year encouraged speculation about the future of the industry. For the first time since before World War II Great Britain had earned a surplus on current account and though the government's policy would be to strengthen the country's financial position still further



The new Ford "

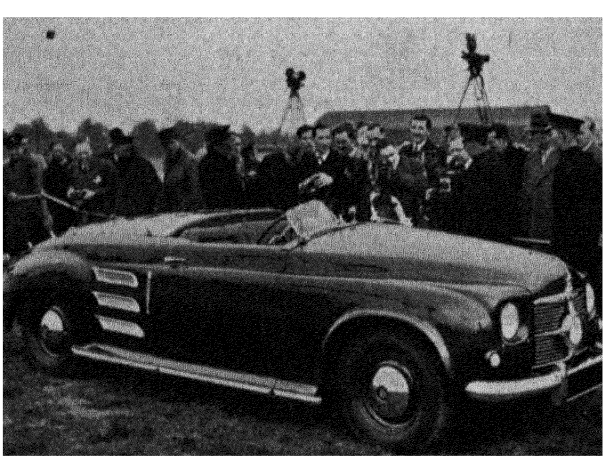
TABLE I. U.K. EXPORTS OF CARS AND TAXIS (NEW), 12 MONTHS ENDED DEC. 1950

Exported to:—	Complete	Chassis
British Commonwealth and Irish Republic		
Australia	76,246	45,916
New Zealand	16,380	3,343
Canada	76,229	
India	10,378	
Malaya	5,910	
Pakistan	1,557	717
South Africa	19,313	
Other Commonwealth countries	22,848	
Irish Republic	8,144	
Total	237,005	49,976
Foreign Countries		
Belgium	12,955	
Brazil	7,176	
Denmark	3,478	
Egypt	1,591	
Finland	609	
France	979	
Germany	3,022	
Netherlands	9,486	4,708
Portugal	2,623	
Sweden	23,647	
Switzerland	5,154	
United States	19,977	
Uruguay	2,585	
Venezuela	1,382	
Other foreign countries	11,949	
Total	106,613	4,708
Total Cars and Taxis	343,618	54,684
Percentage of Total Cars and Taxis to British Commonwealth and Irish Republic	69·0	91·4

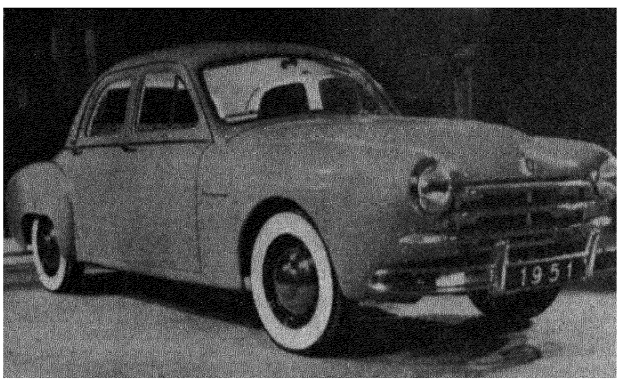
Based on a table published in the *Monthly Statistical Review* of the Society of Motor Manufacturers and Traders; reproduced by permission.

by maintaining the export drive, there was at last some room for manoeuvre—an opportunity to survey the economy as a whole and remove some of the distortions caused by the immediate and dire consequencies of Britain's need for foreign currencies.

The industry that had contributed more than any other to the country's improved position was, not surprisingly, the one that had been most disturbed in the process. In spite of a 25% increase in production in 1950 over 1949, less cars were released to the home market than previously. It had been hoped that some of the increase would go to British buyers since the shortage of sheet steel was being overcome and there was not the same weight in the argument that a scarce material, supplies of which had to be imported from the United States, should not be consumed at home. The



Pressmen looking at the Rover experimental gas turbine car which was first demonstrated in public early in 1950.



The new French Renault "Fregate" which was shown in 1950.

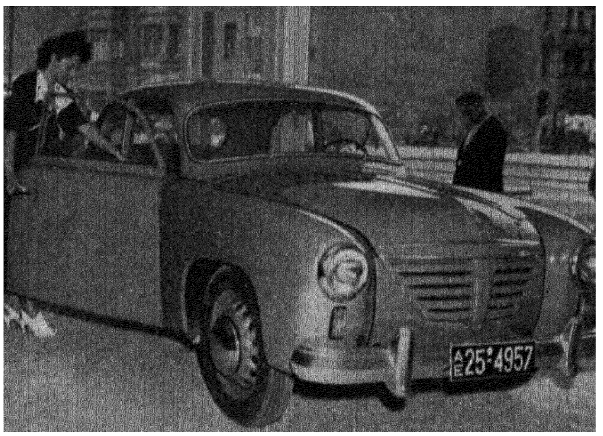
government, however, felt unable to relent in view at once of the continuing necessity to export and of the demands of rearmament, which would not only use much of the sheet steel in question but also make a direct demand on the motor industry itself, though this would probably not make immediate inroads on the current rate of production. The Austin company, for instance, announced in August that it had received an order for several thousands of light four-wheel drive vehicles, exclusive of engines, from the Ministry of Supply and added that production of these would not effect the home and export markets. In fact most of the British manufacturers had surplus capacity which had been kept idle by lack of steel. The taking-up of this capacity by the production of military vehicles would allow some spreading of overheads but would prevent the direct cheapening in the civilian product which increased production would have brought.

Export Markets. The targets set by the Ministry of Supply at the beginning of the year were in terms of a fixed number of cars and of commercial vehicles—110,000 and 81,500 respectively—for the home market; the rest of production, whatever the amount might be, was to go overseas. The total number of cars produced in 1949 had been 412,290; and

TABLE II. U.K. EXPORTS OF COMMERCIAL VEHICLES (NEW), 12 MONTHS ENDED DEC. 1950

Exported to:—	Complete	Chassis
British Commonwealth and Irish Republic		
Africa, British East	2,708	2,184
Australia	20,778	27,873
Canada	6,679	430
India	1,164	2,837
Malaya	1,232	1,823
New Zealand	1,625	4,565
Pakistan	351	—
Ceylon	502	—
Other Commonwealth Countries	6,645	11,130
Irish Republic	1,202	876
Total	42,886	51,718
Foreign Countries		
Belgium	3,907	2,701
Brazil	3,461	1,008
Denmark	949	1,528
Netherlands	3,635	2,239
Portugal	1,688	1,366
Sweden	3,549	839
Switzerland	844	—
Colombia	666	—
United States	948	—
Venezuela	1,095	—
Other foreign countries	10,295	9,236
Total	31,037	18,917
Total Commercial Vehicles	73,923	70,635
Percentage of Total Commercial Vehicles to British Commonwealth and Irish Republic	58·0	73·2

Based on a table published in the *Monthly Statistical Review* of the Society of Motor Manufacturers and Traders; reproduced by permission.



The "Goliath," with a two-stroke engine, which was exhibited in 1950 by manufacturers in Western Germany.

it was hoped that with the prospect of supplies of steel for 450,000 cars this record would be broken. During the first six months of 1950 the industry in fact made 262,500 cars and exported 203,626 (*i.e.* 77%) of them. By comparison with previous years the export of 73,000 commercial vehicles out of a six months' production of 134,000 was ever more creditable to the industry, though it meant a higher rate of home sales than the Ministry of Supply had catered for when they fixed their export target in the spring. The increase was, however, more than covered by the increase of 25% in production. Many questioned the wisdom of imposing such a stiff rate of export on the motor industry: it was 11 years since the manufacturers had been able to give their attention to the home market, and they felt that to neglect the native soil of the industry was to risk the health of the plant that grew in it. One manufacturer indeed reserved the whole production of one of his models for the home market, not wishing to launch it untried overseas. There was also criticism directed at the more immediate effects of keeping the domestic market short of its requirements. The average age of the million or so goods and public service vehicles on the roads of Britain was said to be 13½ yr. as against 7 yr. before the war, and 70% of private cars were more than 11 years old. This led to high maintenance costs and petrol consumption as well as inflated secondhand prices, all of which were necessarily reflected in the prices of British goods and in the payments for oil on international account. Moreover, if the government had applied the ultimate sanction of reducing supplies of steel because of failure to meet export targets, the effect would have been to increase the prices of vehicles in the face of growing foreign competition.

There was a revival in sales to the U.S. immediately after devaluation: 1,400 cars were exported in Nov. 1949. The rate declined somewhat during the first six months of 1950, when 6,005 cars were exported, but showed a marked improvement on the figures for the first six months of 1949, which were 3,082. At the British motor show in New York in the early spring orders worth £1,100,000 were taken. The demand was concentrated on two types of British car—the sports car and the small car. It seemed, as the *Economist* pointed out, that if the aim of the British industry to capture 1% of the American market were ever to be achieved the 40,000 cars sold annually must be mostly of these two types. Already in the U.S. the small British cars were facing competition from the Nash Rambler ($1,808 against the $1,495 of the Hillman Minx and the $1,480 of the Austin A40), and competition might be keener still if the "big three" American firms brought their resources to bear in this field.

The growth of sales to Canada was one of the features of the year. In the first eight months 53,840 motor cars were exported (*cf.* about a quarter of that number in the same period of 1949). By the middle of the year vehicles of all sorts accounted for 30% of British exports to Canada, a result largely of the Canadian dollar shortage but which at the same time reflected credit on British exporters who had patiently built up a coast-to-coast sales organization during leaner times. After eight months Australia remained Great Britain's best market, but not by the comfortable margin of the previous year (though 56,584 cars were exported, as against about 45,000 in the same period of 1949). Here, too, competition from the Americans was reduced by shortage of dollars, but the General Motors Holden, produced by a subsidiary of the U.S. firm and on the market since the end of 1949, offered a threat to British supremacy.

Devaluation did not of course affect the relationship between British prices and those of the continental competitors. Nevertheless the British industry had been able to absorb increased costs more effectively than the French or the Italian, and a 25% increase in production tended to bring prices down. Strong competition from continental makers was really only experienced in continental markets and at both the Brussels and Geneva motor shows there were price reductions on foreign cars to match the British reductions. Fiat, the largest Italian exporters, were expanding their plant with the aid of American loans and German competition also become a factor in 1950: in February, for instance, of the 2,169 cars imported into Switzerland 548 were British, 499 French, 466 American and 439 German. In the first six months of the year the total car exports of the most important continental countries were as follows: France 44,495 (36·2% of output) Germany 26,749 (28·9%) and Italy 9,508 (20·6%).

Design and Research. In Great Britain research continued on the gas turbine as a means of propulsion for road vehicles. The Rover company demonstrated the first turbine-driven motor car at the British motor show in New York. It had an engine of 200 brake horse-power, which was of course too powerful for an ordinary passenger car, and further experiment in this new field would necessarily be in the direction of mass-producing a smaller engine with a more économical fuel-consumption at a cost competitive with that of a piston engine.

Two new Fords, a 6-cylinder and a 4-cylinder model, were the most important additions to the range of British cars to appear in 1950. The five other principal manufacturers contented themselves with modifications to bodies and increases in the capacity of engines. It seemed that the appearance of a "Baby Austin" might be indefinitely postponed by rearmament but there was obviously going to be a large demand on the British market for cars of 1,000 c.c. or less, in view of the increase in the price of petrol. (X.)

United States. The automobile industry of the United States established in 1950 a new all-time production record for the second successive year. Total 1950 production was 7,987,000 vehicles, of which 6,649,000 were passenger cars; 1,333,000 lorries; and 5,000 motor coaches.

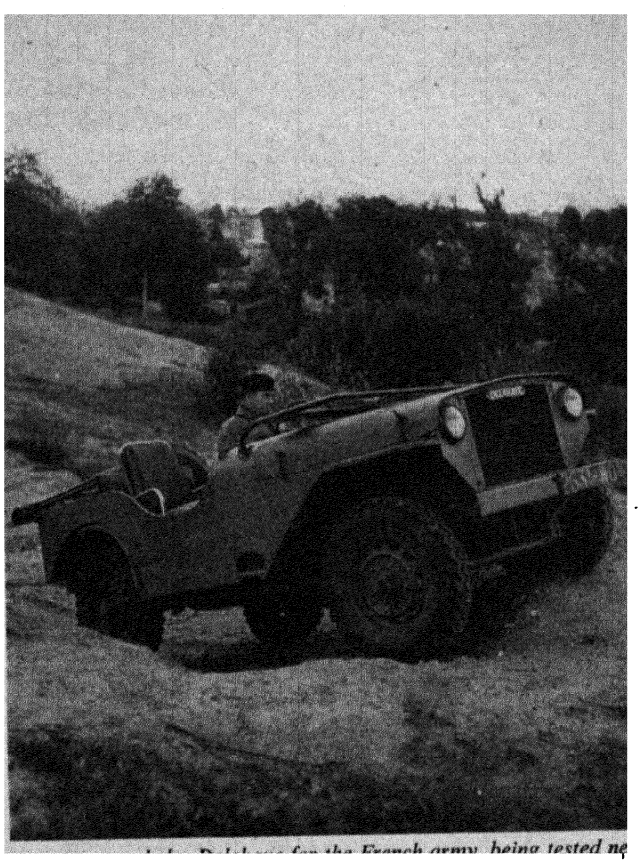
The 6,649,000 passenger cars represented an increase of 1,530,000 cars, or 30% over the 1949 total. Commercial vehicle production increased by 204,000 units, or 18%. Along with total vehicles produced, the 1950 passenger car total was a new record. However, commercial vehicles fell short of the 1948 record of 1,376,155 units. U.S. car exports in 1950 totalled 303,000 vehicles, as compared to the 1949 total of 287,775. The 1950 figure of 3·8% represented the lowest portion of total output sold to foreign markets in the history of the industry. Imports in 1950 were more than double the 1949 volume. Imports from 1947 to the end of 1950 were as follows: (1947) 2,124; (1948) 29,112; (1949) 8,366; (1950)19,700.

The production achievements of the industry were made possible by the general high level of business activity throughout the country. With a few exceptions, most manufacturers were unable to provide their dealers with enough cars to supply the demand—at least not until the end of the year. There was, however, a decline in new car orders during the early part of the year, but the normal spring market had already started to lengthen order lists when the Korean war broke out. The decision for U.S. intervention in this conflict produced a veritable deluge of new car orders. At first this did not affect production and it was not until later that defence contracts and material stock-piling began to reduce the amount of nickel, aluminium, chromium and steel available to car manufacturers. Steel had not been plentiful but was not seriously short until the last months of the year.

The most serious event of the year for car salesmen was the reimposition of Regulation W, the government's credit control bill which had limited purchases during and immediately after World War II. A mild form of this control, requiring a one-third down payment with the balance to be paid within 21 months (three months longer than the wartime version) was restored in September. These terms were short-lived, however, for in the middle of October the Federal Reserve board reduced the number of months from 21 to 15, retaining the one-third down payment provision.

Two manufacturers introduced new " small " cars during 1950, to meet the demand for (1) an economical second car for middle income families and (2) a car whose initial price placed it within reach of many people who previously had to buy used cars. Just how strong the demand was in each of these cases had yet to be established.

In design, the outstanding feature of the 1950 model year was the popularity and extension of the " hardtop convertible " introduced in 1949. Not convertible in the true sense of the word, these cars embodied the racy lines of a convertible while retaining a fixed steel top. This body style was extended to include four-door sedans in 1950. About half of the 1950 models offered hardtop styling. In other respects the 1950 designing differed only slightly from that of 1949, since most manufacturers had provided new designing for their 1949 models. The majority of the 1950 changes were of the " face-lifting " variety.



A new car made by Delahaye for the French army, being tested near Paris in Aug. 1950.

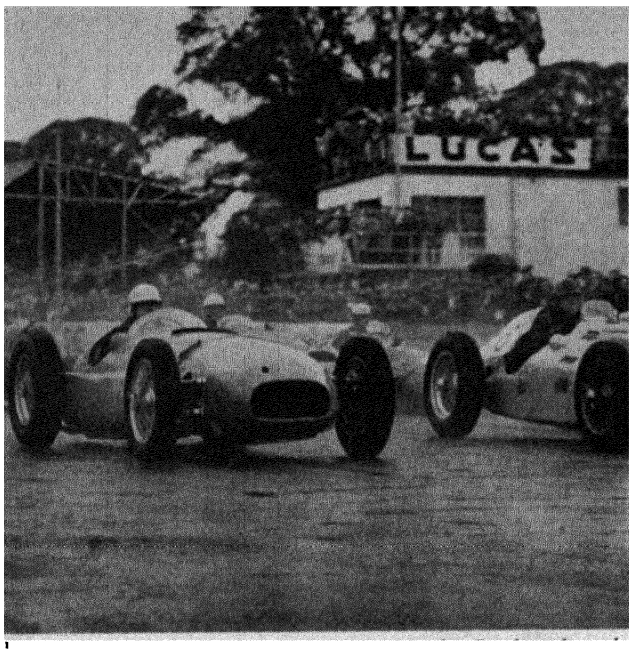
There was a spectacular increase in the number of automatic transmissions offered and sold during 1950. Although exact sales statistics were not available, it was estimated that well over 1,500,000 fully automatic units were produced during the year. By the end of 1950, all automatic transmission manufacturing facilities were operating at full capacity. (C. F. KE.)

MOTOR RACING. The Italian 1½ litre type 158 Alfa Romeos dominated the European *grandes épreuves* in 1950 to such an extent that only the three Alfa team drivers finally contested the world championship. Guiseppe Farina became champion with 30 points, followed by Juan Manuel Fangio, of Argentina (27 points) and Luigi Fagioli (24 points). The 210 mi. European Grand Prix, organized for the first time by the Royal Automobile club on the Silverstone circuit, gave the Alfas a runaway victory, Farina being first at 90·95 m.p.h., Fagioli second and the Englishman, Reginald Parnell, third. Farina repeated his success in the 189 mi. Swiss Grand Prix by winning at 92·76 m.p.h., with Fagioli second and Louis Rosier, in the French 4½ litre unsupercharged Talbot, third. Fangio won the 306 mi. Belgian Grand Prix on the fast Spa-Francorchamps circuit at 110·05 m.p.h., with Fagioli and Rosier again second and third; also the 198 mi. (100 lap) Monaco event at 61·33 m.p.h. and the 311 mi. French Grand Prix at 104·83 m.p.h. He lost the championship, however, by failing to finish in the Italian 312 mi. classic at Monza, won by Farina at 109·67 m.p.h. with Alberto Ascari, in a new 4½ litre unsupercharged Ferrari, defeating Fagioli for second place.

An international meeting at Silverstone, organized by the British Racing Drivers' club, provided Farina (Alfa Romeo) with another easy victory at 90·16 m.p.h. in the Grand Prix class, while class winners in production car races were the 1,098 c.c. Morgan (68·28 m.p.h.), the 1,496 c.c. H.R.G. (71·78 m.p.h.), the 1,995 c.c. Ferrari (83·72 m.p.h.), the 2,443 c.c. Healey (79·92 m.p.h.) and the 3,442 c.c. Jaguar XK 120 (81·88 m.p.h.). This meeting saw the first racing appearance of the new British B.R.M., a 16-cylinder, 1½ litre, supercharged car, but it failed to leave the starting line. Later in the season it won two short-distance races on the Goodwood circuit at 78·5 m.p.h. and 82.48 m.p.h., but two models entered for the Penya Rhin Grand Prix at Barcelona failed to finish. In the absence of the Alfa Romeos this race was won easily by Ascari in the new Ferrari at 93·98 m.p.h.

There was greatly increased interest throughout Europe in 500 c.c. racing and the first international meeting for these small cars held at Goodwood was won by R. M. Dryden, in a Norton-engined Cooper, at 77·23 m.p.h. For sports cars there was the revived Tourist Trophy race on the new Dundrod circuit in Northern Ireland where the winner, Stirling Moss, aged 21, in a 3½ litre Jaguar XK 120, covered 225·452 mi. at an average speed of 75·15 m.p.h. The British hill-climbing champion for the year was R. D. Poore driving an Alfa Romeo.

In the international Le Mans 24 hr. race, the *grand prix d'endurance* went to Louis Rosier, in a French 4½ litre Talbot sports car, which covered 2,122 mi. at an average speed of 89·73 m.p.h. The Rudge Whitworth cup based on index of performance was won by George Abecassis and Lance Macklin driving the new Aston Martin DB Mark II sports saloon. The historic 680 mi. Targa Florio race in Sicily was



The B.R.M., driven by Reg. Parnell, winning the Goodwood trophy at an average speed of 82·48 m.p.h., Sep . 30, 1950.

won by Mario and Franco Bornigia in a 2½ litre Alfa Romeo at 53·87 m.p.h., while Giannino Marzotto, in a 3·3 litre Ferrari, averaged 76·79 m.p.h. to win the 1,050 mi. Mille Miglia round the northern half of Italy.

The Indianapolis 500 mi. race was stopped after 323 mi. because of a flooded track, the winner being Johnny Parsons who drove a Wynn Friction proofing special at an average speed of 123·6 m.p.h. (C. Fo.)

MOTOR TRANSPORT. On Feb. 1, 1950 it became illegal for any road transport operator in Great Britain to carry goods " for hire or reward " over a distance greater than 25 mi. from his base without a licence from the Road Haulage executive. By the end of February 9,300 such licences had been granted for a period of one year and 2,300 applications were still under consideration. With a fleet of 36,750 vehicles (March 31) the Road Haulage executive was predominant in the field of long-distance road haulage, but it was plain that the British Transport commission had no general monopoly: both air and sea transport were outside its control and there was strong competition from the growing fleet of " C " licence vehicles. Meanwhile over most of the country the nationalized railways competed with privately or municipally owned road passenger services, the commission's fleet consisting of only 9,434 vehicles in the provinces, 4,088 in Scotland and 9,800 in London.

Transport Policy. In an election year it was not surprising that nationalized transport should come in for its share of criticism. The Conservative case, badly stated, was that the commission's organization was over-centralized, inflexible and extravagant and that the country's road services were being used to meet a deficit largely attributable to the railways; the solution proposed was the return of road transport to private control. There was also strong Conservative criticism when, in the autumn, the commission decided to restrict the activities of 5,300 road hauliers operating under special permit. The view of Labour was that no problem would be solved by the retention of the less profitable part of the commission's undertaking—a course which would in any case run counter to the intention of the Transport act, which was to provide the country with an integrated system of public transport. Labour solutions included repudiation of interest-payments on transport stock and straightforward subsidization; there was some support too for limitation of the operations of " C " licence-holders. These " C " licences were granted automatically to firms to carry their own goods only, in their own vehicles.

In a speech called, significantly, " An integrated Transport System," Sir Cyril Hurcomb, the chairman of the commission, put forward his own views on some of these issues. He was able to show that some important economies had already been made possible in road haulage by the enlargement of the operating entity and the spreading of overhead costs such as supervising staff and maintenance facilities. He dismissed the idea that the commission had a monopolistic control of transport and pointed at the same time to the many forms of control to which the commission was statutorily bound to submit—though he complained of none of them and indeed welcomed " these opportunities of learning how our conduct of our business is viewed by the ultimate authority." Talking of the need to balance the demands for new or improved services against necessary economies, he pointed out that many demands for special rates, based on alleged social grounds, were in effect demands for a form of subsidy: the commission would view such requests with as much sympathy as commercial considerations permitted, but their view was that, in principle, social services should be paid for by the authority concerned and not by other users of transport. Any form of subsidy was open to objection since it tended to give too much authority to the subsidizing body and to deprive the subsidized undertaking of the stimulus to efficiency; it was in any case against the letter and spirit of the act, which required the commission to pay its way.

Freight. It was clear that the commission already had problems to face and that the solutions offered so far were of a temporary kind. As early as Nov. 1949 the commission had had to ask for an increase of railway freight rates by 16⅔% to cover the rate of deficit which was then running at £500,000 a week. This increase, which came into effect on May 1, was not part of any charges scheme, and no nation-wide scheme could be expected for at least two years. Much of the criticism levelled at the commission as a result of this increase assumed that the public was being forced to pay for the commission's inefficiency; in fact the system of railway charges had hardly been touched since the age when the railways had a practical monopoly. Critics who favoured the return of road haulage to private enterprise were asking in effect for a battle between the railways, with their rates controlled by parliament and under other statutory obligations, and road hauliers free to



The new Leyland Royal Tiger coach in which the engine was placed horizontally under the floor.

act from purely commercial considerations. Those on the other hand whose idea of integration was that the profits of road haulage should pay for the railways' losses did not grasp the difference in scale between the operations of the one and of the other; in 1949 only 16% of the commission's gross receipts were derived from road traffic.

There must, as Sir Cyril pointed out, be some transport services which were less profitable than others: " The transport commission could not, and does not, say that it should not provide any service which is not fully remunerative." The answer to the commission's problem lay therefore not in cutting out unprofitable services or in a permanent " internal subsidy " from one form of transport to another but rather in devising a charges scheme which reflected present conditions and took advantage of the integration of rail, road and inland water transport in one undertaking. The principles on which the freight charges scheme was to be based had been put before the Transport tribunal in the form of a memorandum: there were to be uniform conditions and rates for road, rail and water; a limited liability except where high values were declared and extra charges paid; and rates for different classes of merchandise based more on their loading characteristics and less on their value than had been the case in the old railway classification.

Competition and Costs. Though uniformity of rates between different forms of transport was desirable, the commission would ask for the power to impose different rates between different points in order to cope with competition from " C " licence holders, whose numbers had grown from 590,516 at the end of 1948 to 672,301 at the end of 1949 and to about 700,000 by the middle of 1950. Another element of competition was added during the summer when petrol for private motoring was freed from rationing: in defending the London area passenger charges scheme before the Transport tribunal the commission claimed that this release alone might mean a loss of up to £1·5 million in the yield of the scheme. Other problems facing the commission during 1950 were higher wages bills, the increased tax on motor fuel and the steep rise in the purchase tax on commercial vehicles. Meanwhile most of the hoped-for economies in the operation of road transport were of long maturity and depended on far-reaching re-organization, the lines of which were laid down in a policy statement, " Integration of Freight Services by Road and Rail." This paper, after defining the types of operation for which road and rail were best suited, handed the responsibility for the collection and delivery services of the Railway executive to the Road Haulage executive, which was to develop a vehicle supply-and-maintenance service on behalf of the commission; it also emphasized the need for a common commercial service, to be approached by carefully planned experiments in restricted areas.

London Charges Scheme. In Feb. 1950 an interim passenger charges scheme for the London area was submitted to the Transport tribunal. It had the three main objects: (1) raising the contribution which the London Transport executive would make to the central pool; (2) the substitution of a general early morning rate for the system of workmen's fares; and (3) an equalization of fares between the road and the rail services of London Transport on the one hand and the suburban services of the Railway executive on the other. The scheme met with opposition, especially in so far as it affected workmen's fares, and the tribunal disagreed with the commission about the contribution that London should make to the commission's revenue. But the essential provisions of the scheme came into effect on Oct. 1. The first of the area charges schemes to be submitted by the commission to the tribunal under the terms of the act, it was facilitated by the existing integration of most of London's transport. A large population was affected, including people living as far afield as Royston, Maidenhead and Southend. (X.)

United States. For most sections of the U.S. motor transport industry, the year 1950 was distinguished by the output of an unprecedented volume of goods and services. More vehicles were built than in any previous year, 8,015,750 as compared with 6,255,401 in 1949. The wholesale value of the industry's production of cars and lorries reached $10,495 million, exceeding the 1949 record by 28%. Lorry and bus output, by itself, however, fell to 2·5% below the 1948 record of 1,376,155 units.

Motor cars, trucks, and buses operated a total of 456,000 million mi. over U.S. roads and streets, an increase of more than one-third over the pre-World War II level (333,000 million mi. in 1941). This increase resulted from higher annual mileages per vehicle and more vehicles in operation. Registrations reached 48,484,000 by the end of 1950, 9% higher than the previous record of 1949. Included in this total were 39,710,000 cars, 8,550,000 lorries and 220,000 buses. Motor vehicles remained pre-eminent in the urban and inter-urban movement of people, and were adding steadily to the proportion of freight carried. In 1949 motor vehicles accounted for 85·5% of all inter-city passenger traffic as compared with 79·7% in 1948. Between 1948 and 1949 inter-city bus traffic dropped from 6·5% to 4·7% of total inter-city passenger travel.

The long-term trend towards substitution of motor buses for tram and trolley cars continued in 1950. Thus in 1939 railway operations accounted for 64% of transit passenger revenue while motor buses produced only 33%. By 1949 the distribution had shifted to 40% and 52% respectively.



A tram of London Transport—one of those replaced in 1950 by buses—seen on its journey to Leeds, Yorkshire, where it was to be taken into service.

However, the transport industry as a whole had been experiencing declining patronage and rising costs since the end of World War II. Passenger journeys declined from a peak of about 23,000 million in 1946 to about 19,000 million in 1949. The first ten months of 1950 recorded a further drop of 9·4% below the similar period in 1949, indicating a total for the year of 17,000 million.

The fleet of some 8 million motor lorries in the U.S. in 1950 was divided according to major use roughly as follows: 56% privately owned non-farm lorries, 27% farm lorries, 13% "for hire" lorries and 4% publicly owned vehicles. The importance of these vehicles as prime movers of freight increased rapidly after World War II. There was a pronounced trend toward heavy-duty operation. Thus between 1941 and 1948 the ton-miles carried by single-unit lorries on main roads decreased by 21% against a 69% increase in traffic moved by heavy-duty vehicles. This development was the product of an increase in the number of heavy-duty vehicles, more extensive operation and a higher pay load carried per vehicle. The importance of the latter factor was indicated by the fact that the production of heavy-duty lorries had been increasing at a much faster rate than had that of other types. Total sales of all types of lorries in 1950 exceeded the 1949 figure by only 14%, but the sales of trucks of gross weight in excess of 19,500 lb. (heavy-duty) increased by 80%.

The intensity with which U.S. roads had been used since World War II created many problems for motor transportation. Modernization of road plant and expansion of the carrying capacity of the road system did not keep pace with the increase in traffic. Not only had heavy-duty traffic tended to increase at a faster rate than total road use, but this portion of total volume had concentrated progressively on the main routes, which constituted a relatively small portion of total road mileage. The result was critical traffic congestion, physical deterioration of the roads and a sharp rise in motor vehicle accidents. (C. L. D.)

MOZAMBIQUE: *see* PORTUGUESE COLONIAL EMPIRE.

MUNITIONS OF WAR. The following is a brief description of military supplies of which details were released during 1950.

Armoured Fighting Vehicles and Anti-tank Weapons. In a statement in the House of Commons on July 26, Emanuel Shinwell, British minister of defence, said that Great Britain had 6,000 tanks in reserve—most of them World War II types, but including the new Centurion, which was in full production. This latter was stated to be capable of dealing with the Soviet T.44 (improved T.34) tank which had appeared with the Chinese and North Korean forces, although it was problematical whether the Centurion could take on the heavy Stalin III. At the end of August the first shipment of U.S. armoured fighting vehicles to western Europe comprised about 20 medium tanks for the French army; most of the tank shipments in the immediate future—to the Netherlands, Belgium and Norway—were expected to be of reconditioned Sherman medium vehicles. In October the first heavy tank to be produced in France since World War II, a 50-ton, 1,000-h.p. vehicle, underwent trials. It was equipped with a powerful quick-firing gun and climbed 6 in 10 gradients without difficulty. During the year, several new and improved anti-tank weapons were demonstrated in Belgium and Great Britain. Besides the new U.S. 3·5-in. "Bazooka," demonstrated in Great Britain for the first time in September, a French anti-tank rocket launcher of similar type made its appearance.

Other Vehicles. Early in 1950 efforts to standardize British military vehicles were carried a stage further when the Ministry of Supply issued a general specification to the motor industry defining performances and other desirable characteristics. Service vehicles were required to perform satisfactorily off the road, with or without a trailer, and in extremes of temperature and climate. Standardization of parts was an important feature of the "British Jeep"—a 5-cwt. vehicle similar in general purpose and appearance to the U.S. Jeep—which was demonstrated in July; its engine, developing 80 b.h.p., had been evolved from Rolls-Bentley designs. A similar vehicle, developed for the French army by the Delahaye company, made its appearance in September. A 500-c.c. twin-cylinder motor cycle with special safety features, designed for the British services by the Triumph company, was also demonstrated in July.



The French light anti-tank weapon being fired from the standing position at a Western Union demonstration, Sept. 1950.

Anti-aircraft Weapons. The Royal Australian Navy took into service a new type of anti-aircraft gun mounting—the Staag Mark II—designed to house twin Bofors 40-mm. guns; the mounting, produced in Australia, was power-operated and radar-controlled. The Bofors company of Sweden produced a new 120-mm. high and low angle quick-firing weapon; for the first time the fully automatic principle was adapted to a gun larger than 40-mm. During the year a radio-controlled target aircraft, the first jet machine to be designed in Australia, was undergoing tests at the guided-missile experimental range at Woomera; the pilotless plane would be used as a target for all types of anti-aircraft projectiles including guided missiles. It was fitted with an Armstrong Siddeley Viper turbo-jet engine.

Guided Missiles. In July a new radio-guided rocket was successfully flown off the Welsh coast. It was the prototype of a high-altitude anti-aircraft missile being developed at the Royal Aircraft establishment, Farnborough, Hampshire. In August the Air Ministry and Ministry of Supply announced that Air Chief Marshal Sir W. Alec Coryton had been appointed to the new post of chief executive, guided missiles, Ministry of Supply; the chief executive would administer all research, development and production of guided weapons.

Anti-Submarine devices. In the House of Lords on May 10 the first lord of the Admiralty stated that a new prototype anti-submarine vessel embodying the latest weapons and the

results of lessons learned during and after World War II would be ordered in 1950; Great Britain now had a weapon which threw a depth charge ahead of the attacking ship and various types of "homing" anti-submarine torpedo were being developed. The parliamentary secretary of the Admiralty stated in the Commons on Oct. 25 that a start was being made on the building of stocks of degaussing and other anti-submarine equipment for the protection of merchant ships.

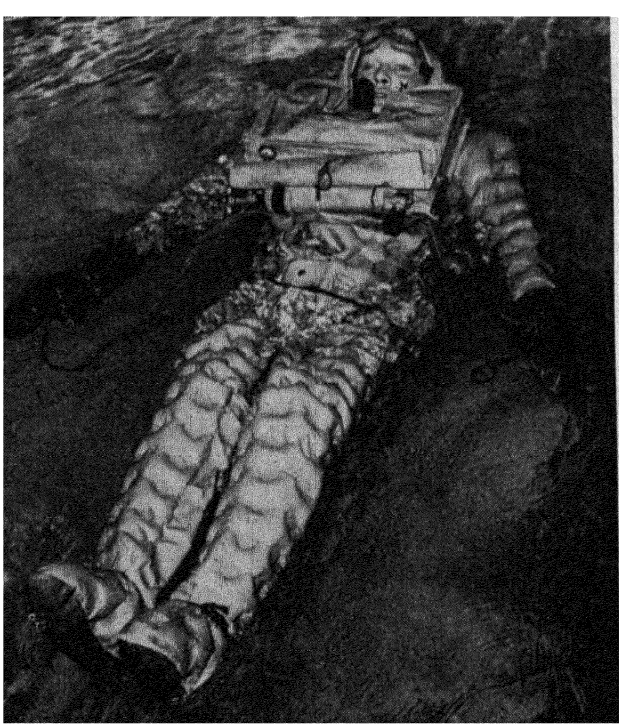
Submarine Escape Clothing. In February a new submarine escape suit, fitted with gloves and hood, and an automatic battery-operated identification light, was demonstrated at Portsmouth. (X.)

United States. Of the 1,595 munitions plants built by the United States during World War II, 270 were retained, owned and managed by the Department of Defence. In addition, 200 plants were placed in a national industrial plant reserve and either retained as "stand-by" or leased or sold with the stipulation that they would be maintained in such condition that they could be re-converted to wartime production in 120 days.

Armoured Fighting Vehicles and Anti-Tank Weapons. The United States had about 6,000 combat-worthy tanks of light and medium types. Except for prototypes and a certain number of the new Patton tank, the United States had purchased no new tanks since the end of World War II. However, the army had a long-range tank programme under which a family of superior tanks would be developed.

The U.S. navy's new 6·5-in. anti-tank aircraft rocket, with shaped-charge warhead, was developed specifically to knock out the Soviet-built tanks encountered by the United Nations forces in Korea. The new rocket was developed, tested and produced at the Naval Ordnance Test station, Inyokern, California, in only 22 days.

Other Vehicles. The army's new "Eager Beaver" was a Reo-built 2½-ton truck designed for high speed on and off the highway; it could operate normally in sub-zero cold, blistering heat, or with its engine completely submerged in water. It could carry a 10,000-lb. load on the highway at 60 m.p.h., or negotiate a 6 in 10 gradient with the same load.



A new submarine escape suit demonstrated in Feb. 1950 at H.M.S. "Dolphin" training establishment, Portsmouth.

Anti-Aircraft Weapons. A new anti-aircraft type of rocket believed to be capable of destroying planes at over 60,000 ft. was undergoing tests.

Development for the U.S. navy of fully automatic intermediate calibre rapid-fire anti-aircraft guns, with improved fire control systems, had reached a point where introduction into the fleet in the near future was expected.

Guided Missiles. The outstanding development in the field of air munitions during 1950 was the setting up of the Office of Guided Missile (O.G.M.); K. T. Keller, president of the Chrysler corporation, was appointed director. In the initial budget for the fiscal year 1951 the Defence department was allocated about $200 million for guided missile development. About $600 million in extra funds for this purpose was scheduled for the supplemental defence appropriation. A prime purpose of the Office of Guided Missiles was to co-ordinate research and carry out the merger of several missile development programmes being carried on by the army, navy and air force. It would foster the incorporation of technique, methods, design and engineering of one missile with those of another (or others) to develop a single usable weapon. A good example of this was the combining of the Martin Matador air defence missile, successfully tested by the U.S. air force, with the navy's Regulus to form an improved missile, Matador-Regulus. Certain features of an army-developed missile might be added, and the final combined weapon would be put into production and used by all three services.

The following were reported to be nearly ready for production and service use, some of them before the end of 1951: Douglas WAC Corporal; General Electric Hermes A-1; Fairchild Lark; and the army-developed LOKI. For immediate emergency use for long-range work, the air force had Banshee, a B-29 remote-controlled drone that could carry a 10,000-lb. bomb load. All three services had training units to handle the missiles when they were delivered; in the meantime these were using advanced experimental models. Co-ordination with the weapons systems had also begun; for example, anti-aircraft guided missiles (such as the Boeing GAPA, to be ready in 1952) were being co-ordinated with the parallel development and production of radar interception nets, techniques and plans for utilization.

Two U.S. army developments in the guided missile field included a 12,000-lb. bomb that could be guided all the way to its target and several self-propelled guided missiles with ranges of more than 500 mi., capable of as much destruction as ten unguided bombs of the same explosive power. The Bureau of Ordnance of the Department of the Navy had a guided missile which would greatly increase the fleet's defence against attacks by modern aircraft. This missile had reached the trials stage and was in limited production. It was to be the primary armament on a cruiser which the navy was converting into a guided missiles ship.

Rockets. New folding-fin rockets developed for naval air use, small enough to be carried in modern high-speed planes in quantity, had far greater range and speed than the aircraft rockets of World War II. These rockets, launched either singly or in salvo from a new type rocket launcher, were capable of bringing under fire aircraft targets from beyond the target's effective defensive firepower. A rocket fuel was developed by the Allied Chemical and Dye corporation from a former chemical "orphan," nitrogen tetroxide.

Torpedoes and Anti-Submarine Device. One new type of torpedo, for use from surface ships and submarines, was undergoing trials and was in limited production. A new launcher for use aboard surface ships, capable of firing anti-submarine rockets with improved underwater ballistics at a high rate, was developed.

Radio and Electrical Equipment. In its policy of miniaturizing equipment so that it could be handled more easily than similar equipment in use during World War II, the Signal corps produced a crystal rectifier the size of a match head; a field switchboard that weighed only 22 lb.; sub-miniature radio valves; and a radio transmitter-receiver, which was so small that it would fit into a large-sized cigarette packet, including power supply, antennae and four valves; the set had a total weight of 11 oz. and a sending and receiving range of more than 200 yd.

Chatham Electronics corporation produced two new generators of 6 kv. and 20 kv. to replace cumbersome and short-lived batteries as a high-voltage supply for various infra-red sighting instruments. Compact and weighing only ten pounds, these generators were powered by a spring motor which operated for an indefinite time. The General Electric corporation perfected two new lightweight X-ray machines designed for use under strenuous military conditions.

Field Rations. Fifty picked men from the army's Alaska command conducted a rigidly controlled test of a new arctic trail ration designed by the Quartermaster corps. Although light in weight, it provided 5,324 cal. a day, compared with the standard ration of 3,600 cal. furnished to troops in temperate climates.

Uniforms and Personal Equipment. A new helmet assembly was developed by the Quartermaster corps. It consisted of an aluminium shell and a shock-resistant plastic liner. Lighter in weight than previous types, it afforded greater protection, both in the area of head covered and in resistance to impact.

Army boots were being treated with a new plastic coating to improve their looks and increase their resistance to wear. The new coating was an acrylate plastic, contained no inflammable solvents, and could be applied without heat. A new protective type resin, called HPM, was developed. Durable enough to withstand laundering or dry cleaning, it remained soft and pliable to the touch and capable of being adapted to meet flame-resistance requirements for clothing.

(A. G. Ne.; N. F. S.; R. S. T.)

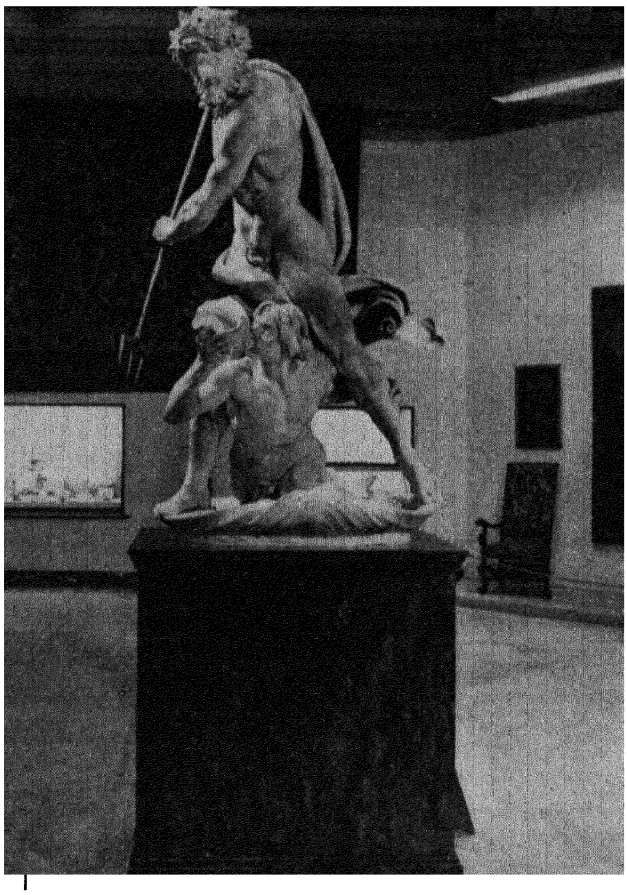
MUSEUMS. The year 1950 showed once again a steady improvement in the museums and art galleries of most countries of the Commonwealth and of those throughout Europe.

Great Britain and Commonwealth. In Great Britain discussions between the government and other bodies aimed at the general improvement of the local museum services were thwarted by the protests of local authorities against any further government encroachments in the field of local government.

On the other hand the interest of the Carnegie United Kingdom trustees and the Pilgrim trust in museums appeared to be increasing. At the end of 1950 the Carnegie U.K. trust announced its decision to continue making grants to local museums, to assist in the training of curators and to strengthen the Museums association, whilst the Pilgrim trust continued its grants to assist the restoration of old or historic buildings, of which a dozen were either in use as museums or had since been adapted as such.

In London, the British museum reopened the Egyptian sculpture gallery in July, the Science museum reopened its national aeronautical collections in June and the Bethnal Green museum (a branch of the Victoria and Albert museum) was partly reopened after being closed since 1939. Great improvements were made in the National gallery, which reopened gallery XXIX in August. This was particularly noteworthy as it was the first air-conditioned art gallery in Britain. Lighting was improved throughout most of the building.

In the provinces there were many reopenings of galleries or museums closed for a decade, among the more important being: the Turner House gallery, Penarth (branch of the National Museum of Wales); Gunnersbury Park museum, Acton; York art gallery, first floor gallery; the Museum of the History of Science, Oxford, and Cannon Hill Park museum, Birmingham, which was re-designed as a museum of local history. New museums were opened at Oxford (new Museum of Eastern Art), Ince Blundell hall, Lancs., and Crows Nest Park art gallery at Dewsbury, whilst plans were going ahead for the conversion of Buckland abbey, near Plymouth, into a local museum at a total cost of nearly £30,000. The Museum of the Gloucester Regiment was handed over to the Gloucester corporation and re-housed next to the existing Folk museum.



Bernini's "Neptune and Glaucus" which was acquired by the Victoria and Albert Museum in 1950.

Throughout the Commonwealth there was steady progress, but little in the way of new building or major reorganization. The Museums associations of Canada, Australia and South Africa regained their prewar virility.

Europe. In France, the Direction des Musées de France published its somewhat limited directory for 1950 with an introduction by J. Vergnet Ruiz. In the provinces there was considerable improvement in the museums at Bayonne (Basque museum), Bergerac (Musée du Tabac), Beaune (Musée du Vin), Châteauroux, Grenoble, Nancy and Toulouse.

In Italy over a score of museums were completely reorganized. The Ministry of Public Instruction republished the *Annuario dei Musei e Gallerie d'Italia* (Rome, 1950).

In Germany there was a steady reorganization but an almost complete lack of rebuilding. In the western zones most curators were back in their prewar positions, but finances were only about one-third of the prewar budgets, and a tremendous amount remained to be done to bring German

museums back to prewar standards. At Hanover, both the Kestner- and the Landesmuseum had only a portion of their collections open to the public. At Düsseldorf, the Shipping museum, the art and historical collections of the city, the Löbbecke- and the Hetjensmuseum were fully open, but the Museum of Political Economy was still closed. At Cologne, where both the great museums were destroyed during World War II, the collections were brought together in a remarkable temporary exhibition. In Berlin seven of the larger museums were open to the public, but here again there was reduced gallery space, and an urgent need for full repairs to damaged buildings. At Heidelberg, the Kurpfälzisches museum was re-installed in the 18th-century baroque palace which it occupied before the war.

In the Netherlands there was a steady recovery from the devastation of the war years. The Dutch Museums association latterly published the first part of a museographical manual (on fundamentals of administration), and the second volume dealing with techniques would appear in 1951.

In Poland, the *Kwartalnik Muzealny* (Cracow) in its first postwar publication described the state of the Polish museums after World War II. Besides containing accusations against 80 Germans responsible for spoliations during the war, it surveyed the whole position as it was in 1950. At Warsaw plans were going ahead for a new Museum of the Earth, which would be erected near the Geological institute.

In Spain considerable improvements were effected in Madrid, Salamanca (Abarca Maldonado house), Sitges (Historical museum), La Riba (Library museum of the Jose Serra Farre foundation) and La Coruña (Provincial museum); and new museums were being planned at Sahagun and Murcia.

In Turkey, the Seraglio museum, Istanbul, was opened and showed a remarkable series of furniture, china, costumes, etc. At Ankara the Archaeological museum was being reorganized and was expected to be fully opened in 1951. An archaeological park was projected.

International Conferences. Possibly the outstanding gathering of the year was the biennial conference of the International Council of Museums, which was held in London, in July, under the presidency of Chauncey J. Hamlin. Representatives from over 30 countries attended. Particular attention was paid to problems of conservation and to the treatment of children in museums.

Among the other important conferences of the year were the technical meetings arranged by U.N.E.S.C.O. A conference on the care of paintings was held at Rome in Dec. 1949, and a conference on museum technique at Stockholm in May. U.N.E.S.C.O. further sponsored a new international agreement under which paintings, sculptures, films and other works of art would pass freely from country to country. Among other important investigations of the year was that of the National Gallery Advisory Scientific committee into the question of fluorescent lighting in museums and art galleries. The broad conclusion was reached that no harm could possibly be done to pictures either on account of the emission of ultra-violet or any other radiation.

The year also saw the setting up of a new International Institute for the Conservation of Museum Objects, assisted by a grant from the Nuffield foundation of £500 a year for five years. The first president was George Stout, of the Worcester art gallery, U.S., and the first vice president and secretary general was F. I. G. Rawlins, of the National gallery, London. (S. F. M.)

United States. More than 25 new museums were established or opened in the United States in 1950. Many older museums were modernized or expanded. The International Folk Art museum was organized as a unit of the Museum of New Mexico in Santa Fe. Among historic structures which were established as museums was Hampton, a great Georgian mansion near Baltimore, Maryland. There were new galleries of mediaeval and Renaissance decorative arts at the Wadsworth Atheneum, Hartford, Connecticut, and of pre-Columbian art at the Minneapolis Institute of Arts. The Boston Museum of Science and the Detroit Historical museum started large buildings. The Ohio State museum, Columbus, and the National Gallery of Art, Washington, completed million-dollar construction projects. The Museum of Modern Art, New York, encouraged good design in home furnishings by arranging special exhibitions and assembling a travelling collection of well-designed modern American pieces for display in Europe. (R. H. Ls.)

Accessions. The City Art museum of St. Louis, Missouri, spent $130,000 for Rembrandt's " Portrait of a Young Man " (1662). Another notable painting by Rembrandt went to the Cleveland (Ohio) Museum of Art at a price reputed to be $125,000. This was the " Portrait of a Student, " dating from the 1650s, given for sale to the Metropolitan Opera association by the children of Otto H. Kahn in memory of their father, a great patron of the opera. The Columbus (Ohio) Gallery of Fine Arts purchased Paul Cézanne's " Victor Choquet " (1878-80).

In a small shop in Italy Walter Heil, director of the M. H. de Young museum, San Francisco, discovered a painting by the Venetian master Gentile Bellini and purchased it for a few hundred dollars. The subject was identified as Leonardo Loredano, doge of Venice from 1501 to 1521. As a gift from William Randolph Hearst the Los Angeles County museum acquired an imposing painting by Sir Anthony Van Dyck of " Rinaldo and Armida," illustrating Torquato Tasso's epic poem, *Jerusalem Delivered.* The death of Mrs. Edward S. Harkness released her husband's bequest of five outstanding paintings to the Metropolitan Museum of Art, New York. These included a portrait of a member of the Wedigh family by Hans Holbein the younger (1497-1543), a " Self Portrait "



The carpet made by Queen Mary and presented to the nation early in 1950 was exhibited at the Victoria and Albert museum, London.

(1480) by Cosimo Rosselli (1439-1507), "Portrait of a Woman" attributed to Antonio Pollaiuolo (15th century), "Elizabeth Farren" by Sir Thomas Lawrence and "Madame Grant," by Marie-Anne Vigée-Lebrun (1755-1842).

Mrs. Edsel Ford presented to the Detroit Museum of Arts a "Madonna and Child" of unglazed terra cotta (dated about 1430) by Luca della Robbia. "St. Martin and the Beggar" by El Greco (1541-1614) was presented to the Art Institute of Chicago by Mr. and Mrs. Chauncey McCormick. (*See* also ART EXHIBITIONS; ART SALES.) (F. A. SW.)

MUSIC. In the world of music, 1950 was a festival year—or, more correctly, a year of festivals; it also marked the bi-centenary of the death of J. S. Bach. Concerts and festivals in commemoration of the great composer were held throughout the world, some of them vast and enterprising, others modest and restrained. But the focal point of most of these events was the town of Prades, Pyrenées Orientales, France, where Pablo Casals emerged from exile to direct a series of Bach concerts and to play, incomparably, the unaccompanied suites for violoncello. In Western Germany, Breitkopf and Hartel announced that the volumes of the Bach Gesellschaft edition were available on microfilm, while the Soviet authorities in Eastern Germany formally acknowledged Bach as a pioneer of bourgeois emancipation from the trammels of feudal tyranny. But perhaps the deepest tributes were the simple performances held in churches and parish halls throughout the world, where neither publicity nor politics impeded the act of homage.

Festivals not exclusively devoted to Bach were held in Florence, Aix-en-Provence, Lucerne, Salzburg, Vienna, Strasbourg, Amsterdam, Cheltenham, Edinburgh and elsewhere in Europe. In the United States, the Berkshire festival remained the most important, and included the first performance of Nikolay Nabokov's *La Vita Nuova*. Contemporary music was well served at the smaller festivals, such as that held at Vancouver and devoted to modern works by Canadian composers. The International Society for Contemporary Music held its annual festival in Brussels, and included in its programmes the last composition by Anton Webern—a *Cantata* which, though written before World War II, had not previously been performed. New works by British, Danish, German, Belgian and Polish composers were also played.

The larger festivals were concerned mainly with new readings of repertoire works, though several new compositions were introduced. A *Quartet in F minor* (*No. 2*) by Sir Arthur Bliss (*q.v.*) was played by the Griller quartet during the Edinburgh festival, and Sir Thomas Beecham conducted Virgil Thomson's *Violoncello Concerto* in which Anthony Pini played the solo part. The latter work received a cool reception from the critics, while the former was acknowledged as an important addition to modern chamber music. At Aix-en-Provence modern French music was represented by Francis Poulenc's *Piano Concerto* and Olivier Messiaens's symphony entitled *Turangalila*, though neither was acclaimed as a masterpiece. In the main, the most interesting achievement of many festivals lay in the re-presentation of older works which, for obscure reasons, seemed to have been neglected; thus Edinburgh was outstanding for Sir Thomas Beecham's performances of the original *Ariadne auf Naxos* by Richard Strauss.

Operatic events during the year were mainly conventional, though the company of La Scala (Milan) paid a visit to England, appearing at the Edinburgh festival and later at Covent Garden, London, where Victor de Sabata's electric reading of Verdi's *Otello* provoked much controversy. Earlier in the year a complete cycle of Wagner's *Ring* was presented at Milan under the direction of Wilhelm Furtwängler, with Kirsten Flagstad in the part of Brünnhilde. Later, she sang the same part in London during the Covent Garden cycle conducted by Karl Rankl. Another notable event was the production of Ralph Vaughan Williams's opera *Hugh the Drover* at Sadler's Wells. On Dec. 21 Erich Kleiber conducted a new production of Tchaikovsky's *The Queen of Spades*, sung in English.



Roger Désormière conducting the Orchestre National de la Radiodiffusion Française of Paris in the Usher hall, Edinburgh, during the 1950 Festival.

First performances apart from those already mentioned included Béla Bartók's *Viola Concerto*, played by William Primrose. The work, left in draft at the time of Bartók's death, was prepared and scored by Tibor Serly and was well received, though critics hesitated in placing it among the best of Bartók's compositions. Its idiom was imbued with the moderation associated with all the works of Bartók's last period, and in this respect was welcomed by the public. Benjamin Britten's *Spring Symphony* received its first London performance under the direction of Eduard van Beinum, and Mátyás Seiber's *Ulysses*—based on sections of James Joyce's text—was included in a B.B.C. programme devoted to contemporary music. Other new works were Vaughan Williams's *Fantasia on the "Old 104th"* and Gerald Finzi's *Intimations of Immortality* (at the Three Choirs festival in Gloucester), Arthur Honegger's *Prelude, Fugue and Postlude* and Benjamin Frankel's overture *May Day* (at the Promenade concerts in London). In connection with the 1950 Promenade concerts, many critics deplored the lack of enterprise evident both in selection of programmes and choice of artists; it was pointed out that the late Sir Henry Wood regarded the series as an opportunity for new artists and new composers to be heard in company with the works of the standard repertoire.

Among the small number of new or unfamiliar artists heard elsewhere, Guido Cantelli proved himself to be an outstanding conductor, as did Georg Solti, musical director of the Munich Opera. Among old friends, Serge Koussevitzky received a great welcome on his return to Europe after an absence of many years. Appointments included Sir Malcolm Sargent (*q.v.*) as the principal conductor of the B.B.C.

Symphony orchestra in succession to Sir Adrian Boult, who became chief conductor of the London Philharmonic; and in the autumn, Sir Thomas Beecham took the Royal Philharmonic orchestra on an extensive tour of America. During the year the musical world mourned the death of Nikolay Yakovlevich Miaskovsky, the distinguished Russian composer; and Guilhermina Suggia, the Portuguese cellist (*see* OBITUARIES). In December the death was announced of E. J. Moeran, the distinguished British composer (*see* OBITUARIES); and of Dinu Lipatti, the young pianist, greatly respected in European concert halls.

Of specialized interest was the announcement that the Haydn society of Boston, U.S., had decided to sponsor a complete and definitive edition of Haydn's works, the volumes to be issued in Vienna. In England, the Royal Musical association and the Arts Council shared in the sponsorship of a plan to produce an edition of the British classics under the title *Musica Britannica*. Otherwise, and excepting publications in connection with the Bach bicentenary, 1950 was not particularly distinguished in the field of musicology; perhaps the most important literary event was the publication of Donald Francis Tovey's *Essays and Lectures on Music* (London, 1950).

An interesting though specialized course on contemporary American music was held in Salzburg during May, when European and American composers assembled to exchange ideas and to hear a representative selection of North American music. Of more general interest was the third successive summer school of music held at Bryanston, England, which included studies based on quartets by Haydn and Beethoven, plain-chant, contemporary opera and Béla Bartók's *Mikrokosmos*. Later in the year a conference on twelve-tone music was held at Locarno, during which many works written in the idiom were analysed and performed. Among the more ambitious schemes, pride of place must be granted to the conference held at Salzburg in August, when delegates from 28 nations discussed the inauguration of an International Musical Olympiad, planned for the summer of 1951; meanwhile, no less ambitious plans were made in connection with the opening of the Royal Festival hall on the south bank of the river Thames in London, and the authorities confirmed that Arturo Toscanini had accepted their invitation to conduct the opening concert.

A new development in the field of mechanical music was the introduction of the long-playing gramophone record, enabling the listener to hear a continuous performance of approximately 25 minutes and thus obviating the artificial breaks necessitated by the older type of disc. The invention, pioneered by Columbia in the U.S., was introduced in Great Britain by Decca.

In general, 1950 was by no means a vintage year in either creative or re-creative music. Great performances were plentiful, and gratitude was emphatically shown; but nevertheless, most of the performances so received were already familiar, and the shadow of dullness hovered dangerously over some of the larger and more spectacular festivals. New works of significance were scarce and critical writing reflected the sense of confusion, the crisis in modern musical thought. Very little music from Russia, or from countries directly or indirectly associated with it, reached western ears, and it was recognized that a vital cultural link had been severed; more than ever before, western musicians were denied information which might have enabled them to gauge the success of the Russian experiment in music and sociology. Western culture was never more isolated; accustomed for so long to an interchange of culture with the east—an interchange which developed in the 19th century and reached fruition in the Serghei Diaghilev groups before and after World War I—it became increasingly apparent during 1950 that further artistic communication was impossible; accordingly, the western gates were opened, and modern American music gained its first foothold on the European continent. Yet American music still appeared to be mainly in an experimental stage, and members of the older heritage, though welcoming the evidence of a new and virile culture, were nevertheless confused by the obvious disparity of style—the mark of artistic immaturity. In Europe itself, most of the new works written outside the twelve-tone idiom conveyed little more than a general dissatisfaction with existing technique, and those within the idiom hardly indicated that they were the products of minds worthy to succeed Arnold Schönberg and Alban Berg. In this respect, perhaps the most successful new work was the *Quartet* by Bliss, in which orthodox values of tonality were preserved without compromising originality of thought or feeling. Other composers approached the problem in different ways: Aaron Copland in the U.S. by a constant purification and simplification of style, Benjamin Britten in England by a technique of sound-colour far removed from the conscious act of orchestration, though not so far removed from some of the earlier impressionist ideals. Yet despite the overall concentration on technique, it became increasingly apparent during the year that the musical world faced a technical crisis that was insoluble by purely technical means: the spiritual problems of the age were seen to be the common property of all creative artists. The eternal discord was everywhere apparent; the approach to its resolution was not clearly in sight. (J. Cw.)

Popular Music. The majority of the successful popular songs of 1950 either echoed older music or represented a deliberate revival of material already established in the past.

The most embarrassing index to public taste was supplied by the spectacular popularity of a naïve piece of pure "corn" called "Goodnight, Irene," which could justifiably claim to be the song of the year. Nobody knew where or when it had started. Another hit was the "nickelodeon" song, "Music! Music! Music!" which jazzed the closely related old tunes of "Down South" and "Good-bye, My Lady Love," with an echo of another ancestor dealing with gin as a stimulant and a bit of a Hungarian rhapsody. The baffling "Tzena, Tzena, Tzena," the background of which was in the folk-music of Israel, was also a success. Equally astonishing was the vogue of the "Third Man" or "Harry Lime" theme, originally played on the zither by its composer, Anton Karas, for the British film *The Third Man*. Its tune consists mostly of three notes of the chromatic scale, reminiscent of the old "Abba-dabba-dabba" and the start of the "Floradora Sextet." "Bewitched, Bothered and Bewildered," written by Richard Rodgers and Lorenz Hart for their musical comedy, *Pal Joey*, in 1941, had a come-back.

Among other song hits of 1950 depending on old rather than new materials were "There's No Tomorrow," copying the Italian "O Sole Mio" note for note, "If I Knew You Were Coming I'd've Baked a Cake," echoing the verse of "A Hot Time in the Old Town Tonight," "Dear Hearts and Gentle People," whose title goes back to Stephen Foster, "La Vie en Rose," based on an old instrumental waltz of the same name, and a curious "novelty" called "The Thing," the tune of which duplicated that of an English folk-song, "The Lincolnshire Poacher."

Less obviously indebted to music of the past, but without much originality or distinction, were the two songs "My Foolish Heart" and "Mona Lisa," both characterized by a pseudo-nostalgia of the maudlin type. Other titles of the year in Tin Pan Alley, commercially successful but aesthetically insignificant, were "It Isn't Fair," "Sam's Song" (recorded by Bing Crosby and his son Gary), "Simple Melody," "All My Love," "I Wanna Be Loved," "Sentimental Me" and "Tennessee Waltz." (S. Sp.)

NAHAS (PASHA), MUSTAFA EL, Egyptian statesman (b. June 15, 1879). After working as a telegraph clerk, he studied at the Khedivial School of Law in Cairo. He became a lawyer in 1906 and was appointed judge in 1914. In 1918 he became secretary general of the Wafd (Nationalist) party led by Saad Zaghlul Pasha, was deported with his leader to Malta (March-April 1919) and to the Seychelles islands (1921-23). He was minister of transport in the Zaghlul cabinet formed in 1924. On the death of Zaghlul on Aug. 23, 1927, the leadership of the Wafd was conferred on Nahas. He opposed a projected treaty with Great Britain on the ground that it did not provide for the complete evacuation of British troops from Egypt. He was premier from March to July 1928 and again from Jan. to June 1930, each time being dismissed by King Fuad. In May 1936 he again came to power, and on Aug. 26 concluded with Great Britain a treaty of alliance by which Egypt attained sovereign statehood, but in Dec. 1937 he was dismissed by King Farouk who emulated his father's hostility to the Wafd and to the parliamentary regime. Nahas Pasha returned to power in Nov. 1942, not without strong British pressure at the palace, but on Oct. 8, 1944, King Farouk removed him from office. He continued as leader of the Wafd and on April 25, 1948, was the object of an unsuccessful assassination plot. In consequence of an overwhelming victory at the election of Jan. 3, 1950, he formed a government on Jan. 12.

NAIROBI, capital of the colony and protectorate of Kenya. Pop. (1950 est.): about 130,000, including 12,000 Europeans and 50,000 Asiatics and Arabs.

The year 1950 was important for Nairobi because it saw the 50th anniversary of the municipality, and the occasion was celebrated by the promotion of the town to the status of city. On March 30 there was a great pageant which moved under a triumphal arch and through highly decorated streets to its climax when the Duke of Gloucester presented to the city its charter from the King.

Fifty years before there had been little there beyond a depot on the Kenya and Uganda railway, and a small township of wood and iron buildings which were replacing the tents and shacks with which the city began. In 1950 there were still some wood and corrugated iron buildings, but in the centre of the town large stone office blocks were prominent and a number of these were built during the year with surprising speed. The last of the old verandah-type shops, where shoes and saucepans were mended in front of the building, disappeared from the main shopping area. Although much building was done, including the beginning of a large new girls' school, a new church and numerous houses and flats, the housing shortage remained acute; particularly for Africans to whom accommodation was allotted by rooms and not by houses. Slum conditions in the African quarters remained bad, and there were over 10,000 for whom houses could not be found. This, with the low wages earned by unskilled labourers, led to an attempted general strike of Africans in May, the principal demand being for a minimum wage of £5 a month.

Kenya, being agricultural and overpopulated, had a strong need for secondary industries, and a number of factories were started in and around Nairobi, including a cannery, a brickworks and a glass factory. The relations between the three main races, European, African and Indian, continued to give anxiety, and the cost of living continued to rise. (D. Hs.)

NARCOTICS. In 1950 the United Nations Commission on Narcotic Drugs appointed an *ad hoc* committee which met with representatives of the four principal opium-producing countries, Turkey, Persia, Yugoslavia and India, and succeeded in drawing up an interim agreement, whereby these countries fixed specific yearly production quotas under supervision of the United Nations, and made decisions on the establishment of monopolies in the producing countries for the control of the production of opium and on the founding of an international monopoly for buying and selling opium. The joint committee of the principal opium-producing countries and the principal drug-manufacturing countries was convened in Geneva in Aug. 1950 and adopted as the basis of its discussions the proposition that opium production could and should be limited to medical and scientific requirements and that such limitation could best be achieved by means of an international monopoly.

The Central Opium board was informed that 700 tons of Jehol opium had been offered by the Chinese government on the market. This would appear to be the first occasion on which raw Chinese opium had been offered on the legitimate market. The existence of such large stocks, which had not been declared to the board, was a matter for concern.

As soon as the first international instrument for the control of narcotic drugs came into force, some provisions of existing conventions became obsolete while others did not work satisfactorily in practice. However, the international control machinery did work, although its complexity made its adaptation to constantly changing conditions more and more difficult. The unification of the existing instruments therefore became a necessity. This simplification could not be achieved simply by a reduction in the number of control bodies. The problem was to create a system of clearly defined international obligations flexible enough to adapt itself to changing conditions without undue delay. The Commission on Narcotic Drugs during its third session asked the secretary general to prepare the way for this new convention. The secretariat thereupon drew up monographs intended to facilitate the work of the representatives of the governments and, at its fourth session, the commission studied this documentation and decided " to request the secretary general eventually to publish general preparatory documentation on the single convention in printed form, in view of its permanent value and interest to scholars and officials " (document E/1361). In the *Bulletin on Narcotics*, vol. ii, no. 1, in Jan. 1950 the United Nations secretariat presented three studies which were part of the monographs mentioned.

The World Health Organization Expert Committee on Habit-Forming Drugs held its second session in Jan. 1950 in Geneva. The committee expressed grave concern about reports that the world production of heroin was still on the increase (although a reduction in consumption in most countries had been noted by the Central Opium board) and adopted a resolution which recommended that the executive board should take steps to secure information on the use or dispensability of diacetylmorphine (heroin) in the various countries, soliciting the aid of the World Medical association and any other organ fitted to participate in this effort.

In Uganda, the government directed that the issue of import certificates for diacetylmorphine should be discontinued and the existing stocks disposed of.

A report on chronic barbiturate intoxication considered by the expert committee showed that the production of barbiturates greatly exceeded the amount needed for therapeutic purposes. The following is quoted from the report: " Since chronic barbiturate intoxication resulted in the development of tolerance and dependence, as manifested by a characteristic abstinence syndrome, it must be concluded that the barbiturates are capable of producing addiction."

It appeared that the principal sources of supply of illicit raw opium were Persia, Thailand, Turkey, China, Mexico and India. The opium control situation in Germany was causing

anxiety; the Central Opium board had received only partial information on inter-zonal trade, and feared that the situation might give rise to illicit traffic. The British and U.S. occupation authorities were setting up a Central Narcotics office for Western Germany.

Turkey was one of the principal sources of heroin. The Egyptian authorities made exceptionally large seizures of Turkish and Syrian opium and hashish. Syria was a transit route for raw opium sent from Turkey to Egypt. Syria was also a major producer of hashish, most of which was smuggled from Syria to Egypt. The smoking of opium was still permitted in Thailand and Indo-China.

BIBLIOGRAPHY. World Health Organization Expert Committee on Habit-Forming Drugs, *Report* of the Second Session, Geneva, Jan. 9-14, 1950; U.S. Treasury Department, Bureau of Narcotics, *Traffic in Opium and Other Dangerous Drugs for the Year Ended December 31, 1949* (1950). (H. J. A.)

NATIONAL HEALTH SERVICE. The gross cost of the national health service in 1948-49, the first year of its operation, was £368 million with a net cost to the taxpayers of £278 million, the other £90 million being contributed from the National Insurance fund (£41 million) and met from superannuation contributions and recoveries from regional hospital boards. The revised estimate for 1949-50 was £450 million as against an original estimate of £352 million. For 1950-51 the cost was estimated at £484 million. In 1946, when the National Health Service act was passed, the service was believed to be costing £160 million a year. There was considerable pressure by the doctors for increased remunerations, but without result. The general practitioner service accounted for 12·3% of the total expenditure in 1948-49, but for only 10·5% in the estimates for 1949-50, the cost in the latter year being £47·1 million, or less than that of the dental service.

The number of general medical practitioners was increasing at the rate of about 300 a year but their distribution throughout the country was not entirely satisfactory. The Medical Practices committee, a statutory body appointed under the National Health Service act to regulate the distribution of doctors, pointed out that one of the chief difficulties encountered was that doctors who wished to start new practices and local executive councils who were anxious to attract doctors were repeatedly baulked by the difficulty of obtaining suitable premises from which a practice could be conducted. In newly developed areas some local authorities were prepared to co-operate to ensure that general practitioner services should be available as new population moved in. Greater difficulties were encountered when a practice changed hands. Sometimes a retiring doctor continued to live in the practice house and was unwilling or unable to move elsewhere. A second complete review of the situation in the whole country was undertaken and fresh schedules published of "under-doctored" and "over-doctored" areas. The Ministry of Health consulted the committee about payments to be made from the inducement fund to encourage doctors in less attractive and heavily populated areas and an experiment was planned with the co-operation of the British Medical association, the Ministry of Health and the Medical Practices committee for one large county area where there was a shortage of doctors. In assessing the general position, it may be noted that there was an average of one general medical practitioner for 1,789 patients in the London area (without counting assistants) but in March 1950, 206 doctors were found to have lists of patients exceeding the maximum of 4,000 prescribed by law for one doctor. In one wealthy London borough, the average was one doctor for 525 patients; in some boroughs in east London there were over 3,000 patients to one doctor.

Further consideration was given to the expenditure on drugs and appliances which increased from £23·6 million in 1948-49 to £35·3 million in 1949-50. The government did not however bring into operation the power given by parliament to make a small charge for each prescription. But the minister of health sought the co-operation of medical practitioners in the prevention of wasteful prescribing. The number of prescriptions made up by chemists in 1949-50 was 200 million compared with an estimate of 149 million. There was growing criticism of the large payments to dentists, which increased from £29·1 million in 1948-49 to £48·6 million in 1949-50, and the minister of health made regulations providing for an interim reduction of 10% in their remuneration. In evidence to the House of Commons Committee of Public Accounts, the ministry stated that dentists had been working "unbelievably long hours" resulting in some scamped work.

The lack of sound financial control and the absence of effective co-ordination between its different branches were the two great unsolved difficulties of the health service. An official committee was therefore set up to study means of securing co-operation between hospital, general practitioner and the local health service.

There was concern at the increasing cost of the local health services, particularly in connection with the provision of domestic help and the cost of conveying patients by ambulance or sitting-case car. The greatest demand on the domestic help service was from old people. A local health authority was not under statutory obligation to provide domestic help, as in the case of home nurses, but such help was usually provided both because there was a great need and because many old people living alone would otherwise have had to seek admission to residential establishments at greatly increased cost. There was however a general feeling amongst local health authorities that the 50% government grant towards this service, as to the local health services generally, was not enough, in view of the somewhat comparable responsibility of the National Assistance board, and the matter was being considered by the local authorities' associations and the government. In some parts of the country, domestic help was being provided in the ratio of one help for every 1,000 of the population. There were some experiments in co-operation between this service and voluntary visitation organized by local old people's welfare committees.

Unlike the domestic help service, the cost of which was increased through need, there was clear evidence that the ambulance service had been abused. This resulted in a strong report by the House of Commons Select Committee on Estimates. The main difficulty in controlling this service was that the ordering of an ambulance was normally a matter for a doctor who was not an officer of the local health authority which had to provide the ambulance. The Ministry of Health accordingly issued a circular of guidance for the chief users of the service, namely hospitals and doctors, and local health authorities. Local health authorities were increasingly requiring certificates of necessity for an ambulance.

There were advances in domiciliary midwifery through the increasing attention given to the administration of analgesia, and local health authorities were asked by the Ministry of Health to review the adequacy of their arrangements for the conveyance of gas and air apparatus to the homes of patients. This meant that a motor car had normally to be provided for a midwife whereas formerly she often used a bicycle. It was estimated that two-thirds of all domiciliary cases attended by midwives now received analgesia.

BIBLIOGRAPHY. *Report* of the Central Service council, H.M.S.O., London, 1950; third *Report* from the Select Committee on Estimates, H.M.S.O., London, 1950; second *Annual Report* of the Medical Practices committee, H.M.S.O., London, 1950. (Jo. Ms.)

NATIONAL INCOME. Further progress was made during 1950 in the computation of national income under the auspices of the United Nations Statistical office: *National Income Statistics of Various Countries, 1938-1948* contained detailed material from 32 countries, and more up-to-date figures were published in the *Monthly Bulletin of Statistics*. In particular progress was made in the computation of national income by components, with specification according to the origin of the income or according to the occupation of those earning it. Although the majority of U.N. member-countries still gave no statistical services comparable to those of the United States and the United Kingdom, the discrepancy was made less by the efforts of the U.N. Statistical office.

However, the methods adopted by countries that contributed their figures to the U.N. were not uniform, and the comparative tables published required scores of explanatory footnotes to point out the various peculiarities. Moreover, even the figures contained in the White Paper on *National Income and Expenditure of the United Kingdom* and in the publications of the U.S. Department of Commerce were mere estimates. National income estimates are based, not on exact information collected by census enumerators or even by scientifically designed sample-enquiries, but, in almost every instance, on incomplete and often exiguous information collected by government departments for purposes other than those of the national income investigator; they are also liable to very substantial revision as and when the compilers gain experience and improve their methods. Governments, too, may perhaps be tempted to indulge in wishful estimating, in the interests of national or of partisan prestige, especially if they have been in office for some years. Such reservations must be borne in mind in studying Table I, which compares the prewar and postwar national incomes of 39 countries.

Some of the governments that contributed to the Statistical office based their figures on the gross value of national products at "market prices," others on the gross value of national products at "factor costs." National income at factor costs is, according to the definition of the U.N. *Monthly Bulletin of Statistics*, the aggregate of all incomes earned in the production of goods and services in the course of a year, including net income from abroad: it is the sum of all wages, salaries, rent, dividends, interest, the income of entrepreneurs and the undistributed profits of corporations before taxation. National income at market prices equals national income at factor costs plus indirect taxes and similar levies, minus subsidies.

The postwar increase of national incomes was continuous in almost every country during 1949 (the U.S. providing one of the few exceptions because of the trade recession during the first half of the year). The rising trend would seem to have continued in 1950, though the U.S. was practically the only country with reasonably up-to-date quarterly figures for 1950. As before, the rising trend of prices was partly responsible for the higher figures. At the same time, in almost every country, there was a noteworthy increase of industrial production.

The real increase of national incomes, as distinct from their nominal increase through currency depreciations, may be attributed to the following causes: (1) there had been in most countries an increase of the population, in some countries a substantial one; (2) a larger proportion of the population than before World War II was engaged in productive activity, as a result (a) of the reduction of unemployment all over the world, (b) of the increased number of women employees and (c) of the prolonged productive activity of older men; (3) economic, financial and monetary policies pursued during the war had increased the demand for goods and enabled producers to work to the limit of their capacity; and (4) the considerable mechanization and modernization both in industry and in agriculture which had been achieved. All these

TABLE I. NOMINAL NATIONAL INCOME

	1939	1945	1946	1947	1948	1949
Argentina (million pesos)	9,294	15,055	20,000	26,000	31,000	—
Australia (£A million)	377	1,299	1,358	1,753	1,955	—
Austria (1,000 million schillings)	—	—	—	18·2	22·2	29·2
Belgium (million francs)	65,200	—	190,600	214,550	243,900	249,100
Bulgaria (1,000 million leva)	56·9	285·8	334	—	—	—
Canada (million dollars)	4,289	9,747	9,796	10,938	12,455	12,977
Ceylon (million rupees)	—	—	—	1,870	2,192	—
Chile (million pesos)	—	42,470	48,947	62,606	76,014	93,000
Czechoslovakia (1,000 million korun)	38·9	—	155·4	194·4	213·1	—
Denmark (million kroner)	6,920	11,968	13,386	13,414	15,484	16,480
Finland (1,000 million markkaa)	29·8*	94·2	152·1	222·9	309·9	323·2
France (1,000 million francs)	369	—	2,476	3,181	5,712	6,929
Germany (1,000 million Reichsmark)	89·8	—	—	—	30†	64·5†
Greece (1,000 million drachmae)	67*	655	6,235	9,206	14,523	19,146
Hungary (million pengos)	5,940	—	13,635	18,746	—	—
Iceland (million krónur)	129	862	1,025	—	—	—
India (1,000 million rupees)	—	49·3	55·8	—	69·2	—
Ireland (£ million)	164·1	—	—	—	—	—
Italy (1,000 million lire)	131·6*	—	—	5,182	6,011	6,192
Jamaica (£ million)	19·6*	—	63·8	—	—	—
Japan (1,000 million yen)	24·2	—	378·9	1,128·7	2,164·5	—
Luxembourg (million francs)	—	3,506	6,844	8,000	9,000	8,800
Mexico (1,000 million pesos)	6	16	19·2	20·9	22·8	25·6
Netherlands (million guilder)	5,207	4,170	9,326	11,251	12,717	14,050
New Zealand (£NZ million)	211·4	350	364·9	411·2	418	473
Norway (million kroner)	4,095	4,462	7,064	8,249	9,141	9,640
Peru (million soles)	—	3,666	4,274	5,448	—	—
Philippines (million pesos)	994	—	2,759	3,371	3,662	4,000
Poland (million złoty)	15,400*	—	—	14,728	18,050	—
Puerto Rico (million U.S. dollars)	228	565	602	653	—	—
S. Rhodesia (£ million)	—	37·3	46·1	56·6	68·5	—
Spain (million pesetas)	26,726	63,259	90,415	102,693	108,517	—
Sweden (million kronor)	12,700*	19,400	21,350	23,390	25,810	26,450
Switzerland (million francs)	8,862	13,468	15,033	16,842	17,550	—
Thailand (million baht)	764*	—	8,697	13,513	14,614	—
Turkey (£T million)	—	5,740	—	6,400	7,900	—
South Africa (£SA million)	406	674·5	—	699·4	784·1	831·7
United Kingdom (£ million)	5,037	8,355	8,249	9,071	9,928	10,226
United States (1,000 million dollars)	72·5	182·7	180·3	198·7	223·5	216·8

* 1938. † Western German Deutschemark. SOURCE: U.N. *Monthly Bulletin of Statistics.*

TABLE II. NATIONAL INCOME, UNITED KINGDOM
(£ million)

	1938	1946	1947	1948	1949
Wages	1,735	3,155	3,600	4,050	4,280
Salaries	1,110	1,775	1,920	2,140	2,250
Pay and allowances of the Armed Forces	78	530	347	246	245
Professional earnings	84	133	156	170	172
Income from farming	60	190	205	258	283
Profits of other sole traders and partnerships	440	690	715	735	745
Trading profits of companies	543	1,275	1,590	1,685	1,590
Operating profits of public enterprises	25	4	28	126	140
Rent of land and buildings	395	445	453	463	471
Income arising in the United Kingdom	*4,470*	*8,197*	*9,014*	*9,873*	*10,176*
Net income from abroad	168	52	57	55	50
Total	4,638	8,249	9,071	9,928	10,226

SOURCE: *National Income and Expenditure of the United Kingdom 1946 to 1949.*

factors were in operation during 1950, after a temporary setback in employment during 1949 in several countries.

The year 1949 and the first half of 1950 constituted a period of comparative stability of prices and earnings. Accordingly, the spectacular postwar rise in national incomes due to inflation was slowed down in most countries. The accentuation of the upward trend in wholesale prices during the second half of 1950 naturally tended to raise considerably the national incomes of countries producing raw materials. On the other hand, in the industrial countries there was a time-lag between the rise in raw-material prices and the resulting all-round rise of prices and incomes, so that in their case the year was not expected to show spectacular changes on that account. The effect of currency depreciation on national incomes was still clearly seen in the figures for France and Greece in 1949. In Italy, however, after a sharp rise between 1947 and 1948 the increase in 1949 was relatively moderate and could be attributed to higher industrial output and to similar normal factors. The increase of Western Germany's national income, which was more than doubled in 1949, was to be explained by the remarkable economic recovery that followed the stabilization of the currency. In Japan, conversely, the effect of the economic recovery was accentuated by the delayed effect of the depreciation of the yen.

In the U.S. 8% of the national income in 1949 was derived from agriculture as against 5% in Great Britain, and 36% from manufacture as against 52% in Great Britain. In both countries government revenue represented 10%. In the U.S. commerce accounted for 10% and transport and communications for 9%, while the combined British figure for commerce and transport was 27%. In Norway agriculture represented 15%, manufacture 53%, commerce 14% and transport 10%. In Italy the proportion of agricultural income was 34%; *i.e.*, 1% higher than that of income from manufacture.

The U.N. annual volume including data received by Feb. 1950 contained much previously unobtainable material for 1948 and earlier years and provided, among others, a series of tables giving the "real national income" and the "per capita income" of a number of countries. The real national income is the national income measured in constant prices, its annual figures being reduced to the same price level—unfortunately after different methods of computation in the various countries. Real per capita income is estimated, by dividing the estimates of real national income by the mid-year population figures.

In terms of constant prices the national income of Finland increased from 29,670 million markkaa in 1938 to 31,640 million in 1948, the nominal increase to 309,900 million being due to the sharp rise in the price-level, and the per capita real income actually declined from 8,115 markkaa to 7,994. For France the real income actually declined between 1938 and 1948 from 328,000 million francs to 323,000 million, and per capita income from 7,817 francs to 7,783 (1938 prices), a nominal increase from 328,000 million francs to 5,712,000 million due mainly to higher prices. The decline of the real income was even more striking in Greece, where the real income fell from 67,372 million drachmae to 48,400 million, and the per capita income from 9,541 drachmae to 6,221. On the other hand the real income of the Netherlands increased from 5,395 million guilders to 6,312 million, and the per capita income from 621 guilders to 645. In Switzerland the real national income increased from 8,314 million francs to 9,957 million, and the per capita income from 1,983 francs to 2,160. In the U.S. the per capita disposable personal income increased from 857 dollars to 1,302 (on the basis of 1948 prices). In the United Kingdom the gross national income (on the basis of 1948 prices) was £8,840 million in 1938 and £10,500 million in 1948, while the per capita gross income increased from £186 to £210.

The index of real per capita income compiled by the United Nations was far from complete, as the full figures for 1938-48 were available only for three countries, the United States, the United Kingdom and Switzerland. Nevertheless, given a higher degree of uniformity, this table would provide useful material for the purpose of comparison.

In the United Kingdom between 1948 and 1949 wages, salaries, income from farming and operating profits of public enterprise showed noteworthy increases; pay and allowances of the armed forces, professional earnings, profits of individual traders and rent of land and buildings remained almost

TABLE III. NATIONAL INCOME, UNITED STATES, BY DISTRIBUTIVE SHARES ($'000 million)*

	1939	1948	1949	1950†
National income	72·5	223·5	216·8	236·0
Compensation of employees	47·8	140·2	140·6	152·2
Wages and salaries	45·7	134·4	134·2	144·8
Private	37·5	115·7	113·7	122·3
Military	0·4	4·0	4·3	22·5
Government civilian	7·8	14·7	16·1	
Supplements to wages and salaries	2·1	5·8	6·4	7·4
Employer contributions for social insurance	1·5	3·1	3·5	4·1
Other labour income	0·5	2·8	2·9	3·3
Income of unincorporated enterprises and inventory adjustment	11·3	39·8	34·4	36·2
Business and professional	6·8	22·1	21·0	23·2
Unincorporated enterprises	6·9	22·5	20·3	24·7
Inventory value adjustment	—0·2	—0·4	0·7	—1·5
Farm	4·5	17·7	13·4	13·0
Rental income of persons	3·5	7·5	7·3	7·4
Corporate profits and inventory adjustment	5·8	31·8	29·9	35·2
Corporate profits before taxes	6·5	33·9	27·6	39·8
Corporate profits tax liability	1·5	13·0	10·6	n.a.
Corporate profits after tax	5·0	20·9	17·0	n.a.
Dividends	3·8	7·5	7·8	8·9
Undistributed profits	1·2	13·4	9·2	n.a.
Inventory valuation adjustment	—0·7	—2·0	2·2	—4·6
Net interest	4·2	4·1	4·7	5·0

* Detail will not necessarily add to totals because of rounding. † Preliminary.
SOURCE: U S. Department of Commerce (except 1950).

TABLE IV. GROSS NATIONAL PRODUCT OR EXPENDITURE, UNITED STATES ($'000 million)*

	1939	1948	1949	1950†
Gross national product	91·3	259·1	255·6	279·0
Personal consumption expenditure	67·5	177·4	178·8	191·0
Durable goods	6·7	22·9	23·8	29·5
Non-durable goods	35·3	100·9	98·5	101·9
Services	25·5	53·7	56·4	59·6
Gross private domestic investment	9·9	43·1	33·0	48·0
New construction	4·9	17·7	17·3	21·7
Producers' durable equipment	4·6	19·9	19·5	24·5
Change in business inventories	0·4	5·5	−3·7	1·8
Net foreign investment	0·9	1·9	0·4	−2·4
Government purchases	13·1	36·6	43·3	42·1
Federal	5·2	21·0	25·3	23·0
State and local	7·9	15·6	18·0	19·4

* Detail will not necessarily add to totals because of rounding. † Preliminary.
SOURCE: U.S. Department of Commerce (except 1950).

unchanged; and the trading profits of companies declined. The fall of company profits was partly due to a change in the tax laws whereby a large part of the increase in the national product was channelled into depreciation allowances and did not rank as a profit for income-tax purposes. Moreover, about £400 million of the profits earned in 1948 were of a non-recurrent nature, due to the writing-up of inventories because of higher prices. This kind of profit was expected to be no more than £75 million in 1949, because of the smaller increase of prices, but may have increased in importance during 1950. A comparison with the last prewar year shows a striking decline of the net income from abroad, due to the liquidation of a large proportion of overseas investments and to the increase of foreign debts.

The total of salaries increased by 5% in 1949, partly because of the increase in the number of salary-earners by 1½%. The total of wages showed an increase by 5½%, as against 12½% in 1948 and 14% in 1947. The increase in 1947, however, was largely due to a rise in the number of wage-earners, to the replacement of wartime women workers by men and to the decline of the manpower in the lower-paid industries—factors no longer important by 1948, when the number of wage-earners increased by 1½% only (in 1949 the increase was even smaller). (*See* also PRICES; WEALTH AND INCOME, DISTRIBUTION OF.) (P. EG.)

NATIONAL INSURANCE. There were no major amendments in the national insurance scheme during 1950 but in some directions the administrative procedure was simplified, such as for claiming sickness benefit and for entitlement to benefit. New regulations were made so that students from other countries who come to Great Britain during their vacation and take up temporary employment connected with their studies were not usually required to pay National Insurance contributions. The same principle would apply to apprentices from other countries. National assistance administered by the National Assistance board was available to provide financial aid for persons not entitled to insurance benefit or in addition to such benefit and old age pensions. The rates of assistance were increased during the year. For example, a married couple with three children under 11 years of age would have the income made up to 73*s.* 6*d.* a week with, in addition, a rent allowance where required.

It was estimated that 795,000 insured persons in the United Kingdom were absent from work owing to sickness and received national insurance benefit on July 18, 1950, the highest number during the year being 1,074,000. On July 18 also 60,000 were absent owing to industrial injury; the number was fairly constant during the year, the highest being 67,000 in February.

The collateral agreement on social security signed by the five Brussels Treaty powers was ratified. Agreement was reached between France and Northern Ireland for reciprocity in social security benefits on the lines previously agreed between France and the United Kingdom. During the year the French government co-ordinated the existing general and special schemes of social insurance. In Italy an act was passed introducing improved schemes of insurance against employment injury in agriculture. In Denmark, amending legislation gave a less stringent definition of invalidity and provided allowances on a more liberal basis. (*See* also NATIONAL HEALTH SERVICE; SOCIAL SECURITY, U.S.)

See "National Insurance," *Ministry of Labour Gazette*, Aug. 1950; *Bulletin of the International Social Security Association*, pp. 13, 31 and 33, May 1950, and pp. 28 and 31, June 1950. (JO. MS.)

NATIONALIZATION. Like 1949, 1950 was a year which saw few new industries transferred from private hands to the state. In western Europe as a whole, no further nationalization had been planned for the year; in Great Britain the reduction in the Labour government's majority in the Feb. 23 general election in effect prohibited even what had been proposed in the party's election manifesto. In Australia and New Zealand, the return of Conservative governments was interpreted in part as a vote against nationalization. Only in eastern Europe was there a definite movement forward: in some countries, the state took over more retail trade; in almost all there were signs that the next step would be the nationalization of the land.

Great Britain. In Great Britain no industries were vested during the year. The chief event was the government's decision towards the end of the year that it would proceed with the Iron and Steel act at the earliest statutory opportunity. The Iron and Steel board was consequently appointed in October and the vesting date was fixed for Feb. 15, 1951. This decision was severely criticized by the Conservative opposition, who argued that, since the steel industry must inevitably be closely concerned in the rearmament programme, it would have been better to have left it undisturbed until a later date. They suggested also that it might have been better, even at that late stage, to revive the Steel board as a means of controlling the industry. The government, on the other hand, argued that to implement the act was the only way to end the uncertainty in the industry and that rearmament made national control all the more necessary; and this was upheld in the House of Commons by a majority of six. Unlike the other nationalizing acts passed by the Labour government since 1945, the Steel act continued the existence of the companies to be taken over. The Iron and Steel corporation would become the sole shareholder in the 92 companies to be nationalized.

Earlier in the year the Labour party in its election manifesto published its plans for further nationalization; at the same time the Conservative party made its counter proposals. Each followed closely the patterns foreshadowed in the policy statements published in 1949. The Labour party proposed to nationalize sugar, cement, meat wholesaling, cold storage, water supplies and "suitable" minerals, and to mutualize insurance. It also proposed public ownership for certain sections of the chemical industry and for the shipbuilding and ship-repairing industries, if these should become necessary. The Conservatives on the other hand, recognizing that the coal industry and the railways could not be "unscrambled," promised to decentralize them. It was proposed to halt the purchase of road transport undertakings and where possible to sell back to private owners what had already been nationalized. The Steel act was to be repealed; but the party held itself free to decide the future of the gas and electricity industries.

After the election none of the Labour party's plans was in fact put into effect, though at the end of the year the King's

speech foreshadowed the nationalization of the British Sugar corporation, already largely owned by the state. During the year, however, much attention was devoted, both in parliament and in the trade unions, to the means by which the industries already nationalized could be made more efficient and brought more closely under public control. In a special report the Trade Union council also suggested that nationalization might not be the best formula for all industries; it suggested that the kind of control embodied in the Steel board should be re-examined. In parliament, Herbert Morrison suggested that all nationalized industries should be subjected to a periodic independent review at intervals not shorter than every seven years. This was a suggestion in which the chairmen of the nationalized industries concurred. Another view was that the Public Accounts committee should be given the task of examining the affairs of the nationalized industries.

During 1950 the reports of the major nationalized industries for 1949 were published. In 1949 the National Coal board further improved its financial position. It made an operating profit of £29·4 million and a net profit of £9·5 million, reducing the accumulated deficit to £12·3 million. This result was once again largely because of the export premium of £1 a ton which the board was able to charge; but perhaps the most encouraging feature of the report was that the 15-year upward trend in costs which had been halted in 1948 was reversed in 1949. Costs fell on an average by 6*d.* a ton. During the early part of 1950 the Coal board continued to make profits and, according to the provisional figures for the first half of the year, the accumulated deficit had been reduced to £4·2 million. In general, however, the board's difficulties seemed to be increasing. Consumption throughout the year increased by more than production; and throughout the year there was a steady loss of manpower. Towards the end of the year, in spite of increasing productivity, average weekly production fell below the comparable figures for the year before. By the end of October, stocks failed to reach the target figure of 16·5 million tons and exports had to be reduced.

The British Transport commission reported a greatly enlarged loss for 1949—£20·8 million against £4·7 million. This was the result of falling traffics combined with rising costs and at the end of 1949 the commission was forced to apply for an increase of 16⅔% in its freight rates. In May of 1950 this increase was granted; but, in spite of the increased revenue that resulted, the commission forecast a loss of £15 million for 1950. Only if the rise in costs was halted could it foresee a balance in 1951. As a result of these losses, as well as of the purchase of road transport undertakings, the commission's liquid resources were depleted during the year; it became clear that it would soon have to raise fresh capital. During 1950 the commission took one step towards its ultimate goal of integration by bringing into force an interim charges scheme for the London transport area. The principle behind this scheme, as for the ultimate integration of the whole country, was that the charges between equal distances should be the same, whatever form of transport was used. At the beginning of the year road haulage was taken over, and at the end of the year the number of licences granted to long-distance hauliers, enabling them to operate outside a radius of 25 mi., was much reduced.

Cable and Wireless, Ltd., made a profit of £1·9 million for the 15 months ending March 31, 1950, a slightly lower rate than in the previous 12 months. This was largely accounted for by the increased costs that followed devaluation. The volume of traffic continued to increase.

The Raw Cotton commission made a loss of £7·4 million to July 31, 1949. The fall in cotton prices during that year necessitated a heavy writing down of stocks; but the subsequent rise brought a corresponding advantage. In the next six months the net profit was £8·7 million.

The nationalized air transport reduced its operating loss (when capital losses are excluded) from £10·6 million to £9·2 million. This was still much larger than had been hoped at one time: but the failure to reach a lower figure was partly attributable to the increased costs that followed devaluation and partly to the continuing need to operate unsuitable aircraft. During 1950 better results were recorded, giving hope that for 1950-51 the losses would be cut. But a substantial improvement could not be expected until the new fleet of aircraft came into operation in 1952. British European airways, which cut its deficit from £2·8 million to £1·4 million, was the first to fall below its grant.

The British Electricity authority made a profit of £7·2 million in the year to March 1950. During 1950 the hope of bringing generating capacity to the level of actual, much less of potential, demand still seemed remote.

Western Europe. In western Europe, mainly because of more normal economic conditions in the later part of 1949 and the beginning of 1950, better financial results were returned by some nationalized industries. The report of the French coal mines showed that for the first time a working profit had been made. This was sufficient to cover the increased amortization that followed a revaluation of the assets but would have been insufficient to cover the capital charge. For investment French nationalized industries still leant heavily on Marshall aid. During 1950 the financial position of the French railways deteriorated and it was estimated that a deficit of Fr. 95,000 million would have to be covered from the budget. Proposals were put forward for financial reform and retrenchment, including a possible splitting of the traffic between heavy traffic, on which a deficit must be expected, and medium traffic, on which a profit must be earned. Passenger rates were raised at the beginning of 1950 but this resulted in a reduction in revenue. If no steps were taken it was estimated that for 1951 the deficit would rise to Fr. 120,000 million. At the beginning of 1950 a loan of Fr. 250 million was negotiated in Switzerland.

In Italy a special committee was established during the year to attempt to reorganize and render efficient the state-owned enterprises (which included nearly all steel, heavy engineering, shipbuilding, shipping and the largest banks); legislation was introduced in the middle of the year putting the Po valley oilfields, from which increasing quantities of natural gas were being drawn, under a national institute. This did not necessarily, however, mean the exclusion of private companies.

Eastern Europe. In the Soviet-dominated countries, in which practically all heavy industry was already nationalized, measures were taken to eliminate private ownership from retail trade and plans were made for the collectivization of agriculture. In Poland, for example, it was announced that agriculture was largely to be collectivized by 1955. (*See* also PEASANT MOVEMENT.) In Yugoslavia, here as in other spheres diverging from the Soviet pattern, legislation was passed under which nationalized industries were to be run by workers' collectives. A council was to be elected from among the workers (the members of the council continuing their normal work) and this council was to appoint the board of management.

Commonwealth. Both in Australia and in New Zealand, the new Conservative governments set themselves as far as possible to undo nationalization. One of the first acts of each government was to restore to an independent board the management of the central bank, and among the first of the Australian government's legislative proposals was a bill to repeal the 1947 Bank act. The New Zealand government

proposed to hand back to private enterprise both the mineral rights that had recently been nationalized and the National airways. The Australian government went even further in proposing legislation under which no further nationalization could be enacted without a referendum. In Australia, however, the state of Victoria took the first steps in nationalizing gas supplies by acquiring the ownership of the two existing companies. (J. R. AY.)

NATIONAL PARKS. The National Parks commission (for England and Wales) published the proposed boundaries for the first three areas which it was intended to proclaim as national parks and these were discussed with local authorities. The boundaries for the Peak and Lake district parks were soon approved but a number of local authorities opposed the Snowdonia park proposals.

The local councils in the area of the Peak park wanted a joint advisory committee instead of a joint board, but the minister of town and country planning, Hugh Dalton, insisted that the administration of the park should be under a joint board. A sum of £33,000 was provided for the expenses of the parks commission in 1950-51. On Dec. 28 Sir Patrick Duff, chairman of the commission, signed the order for the designation of the Peak National park.

Canada. The Fundy National park was formally opened on July 29. Situated on the Bay of Fundy between the Goose and Upper Salmon rivers it had an area of 80 sq.mi. More than 1,045,000 tourists visited the national parks between April 1 and July 31, the largest number ever recorded. The Department of Mines and Resources, of which the National Parks service was a part, was changed early in the year to the Department of Resources and Development.

India. Work proceeded on the Bombay National park, a small area of 9 sq.mi. near the Kanheri caves. Plans for similar parks were being prepared in Gujerat, Konkam, Khandesh and Karnatak. An area of 80 sq.mi., known as Kulgi, in the Kanara district was selected for a wild-life sanctuary.

Israel. A national development plan, published in May, envisaged a chain of national parks, forests and natural reserves throughout the country. The areas in 1950 consisted mainly of eroded mountain slopes of little economic or agricultural value but they would be developed " because of their situation or natural beauty " into recreation and holiday areas.

Kenya. An area of 300 sq.mi. on the slopes of Mount Kenya had been proclaimed a national park in Dec. 1949. In March new regulations were issued for the Tsavo, Gedi, Olorgesailie and Nairobi National parks. During the year Colonel Mervyn Cowie, director of the Kenya National Parks trustees, spent several weeks visiting the principal national parks in the U.S.

Northern Rhodesia. An area of 8,650 sq.mi. in the low-lying wild jungle area in the basin of the Kafue river was proclaimed a national park. In order to give flora and fauna time to establish themselves the entire area of the park was to be closed for five years.

Union of South Africa. During the 1950 tourist season (May 27-Oct. 15), 55,921 tourists and 13,943 cars passed through the Kruger National park. These figures were a record. The weather was good and there was plenty of game. In September it was announced that the Kruger National park had been declared free of malaria and that in future the area of the park south of the Sabie river would be open to visitors.

Southern Rhodesia. An area of the Inyanga district, about 84,000 ac. in extent, was declared a national park. Although administered for about a year as a national park, the governor's proclamation in September was the first official notification. In November, the secretary of internal affairs and chairman of the National Parks Advisory board, A. G. Cowling, stated the national parks were being extended and that four or five areas would be set up as shooting reserves. The first director of national parks, J. S. Vorley, took up his duties towards the end of the year.

Tanganyika. In November the Tanganyika Legislative Council agreed to the setting up of the Serengeti National park and empowered the governor to issue the necessary proclamation. Masai tribesmen living in the area would be permitted to remain, but ultimately it was hoped that when more and better water supplies were provided in other areas the tribesmen would withdraw their cattle from the park. The estimated area of the park was 5,670 sq.mi.

Yugoslavia. Early in the year the Plitvichka Yezera (Plitvitza lakes) in northern Croatia, were declared a national park under the control of a special board, to be developed as a tourist centre. The district consists of 15 mountain lakes linked together by a variety of rapids and waterfalls at over 2,000 ft. above sea level. (X.)

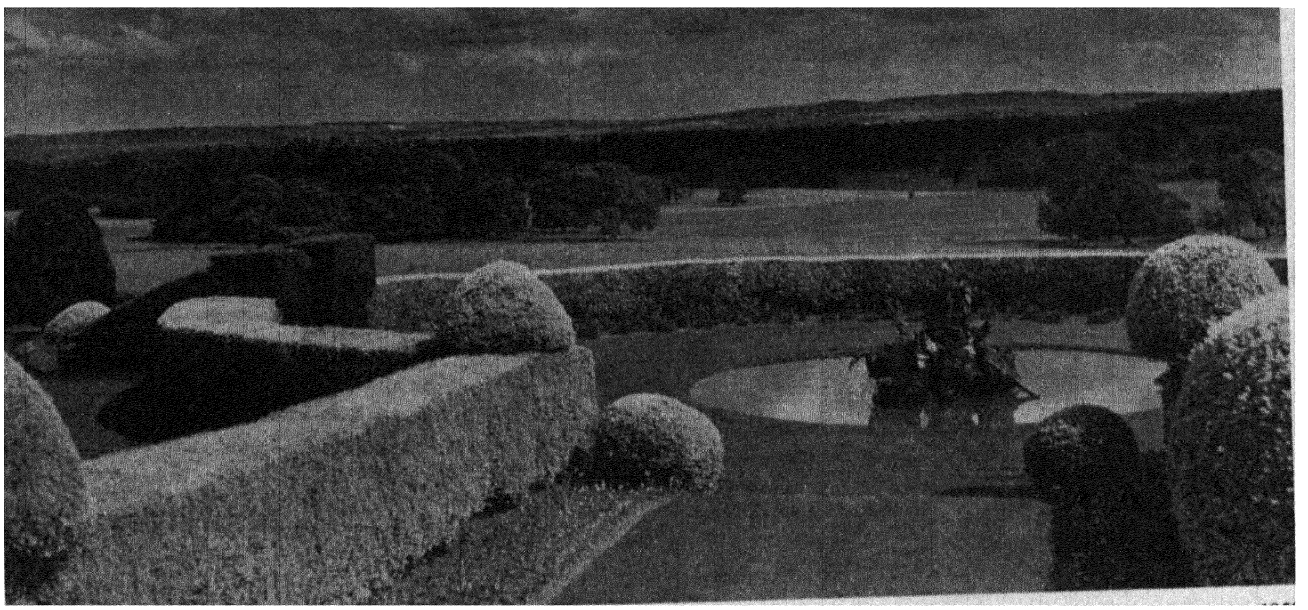
United States. Approximately 32,782,000 visitors were recorded during 1950 at the national park service areas of the U.S. Among major improvement projects completed during the year were a water supply system for Mesa Verde National park and a cooling and distribution system for the thermal waters at Hot Springs National park. Considerable headway was made on pier and other construction work at the Statue of Liberty National monument for the benefit of visitors and to improve its general appearance. In several areas, additional overnight accommodation for visitors was supplied by the concessionnaires under contract with the federal government. The first accommodation for visitors to Katmai National monument, Alaska, was provided during the summer when Northern Consolidated airlines ran two camps there.

During 1950, there were a number of demands for commercial utilization of natural resources of national park service areas. One such demand, calling for construction of dams in Dinosaur National monument, was discussed at a public hearing in Washington, D.C. Conservationists and national park service officials testified against the proposal, pointing out the irreparable damage of scenic canyon terrain which would result. The secretary of the interior decided in favour of the dams. Final decision on the proposal however, rested with congress. (*See* also WILD LIFE CONSERVATION.) (N. B. D.)

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NATIONAL TRUST. During 1950 the trust received legacies amounting to £76,472. Owing to the heavy cost of repairs to its properties the accounts for 1949 showed an excess of expenditure over revenue of £31,525. The membership of the trust increased in 1950 to 23,403. A gift of Ascott, near Leighton Buzzard, by Mr. and Mrs. Anthony de Rothschild included fine French and Chippendale furniture; pictures by Rubens, Hogarth, Gainsborough, and by Cuyp, Hobbema and other Dutch painters; and a superb collection of oriental porcelain with examples from the Ming dynasty and the K'ang Hsi period, and of Chün ware of the Sung dynasty. Mrs. McGrigor Phillips gave Temple Sowerby manor, Westmorland, a handsome red sandstone house, mainly of the early 18th century, but partly 16th century. Mr. F. W. Smyth gave the Mussenden temple, Co. Londonderry, a folly in the form of a rotunda, with extensive coastal views. It was built about 1783 by the Earl of Bristol, bishop of Londonderry, in honour of Mrs. Frideswide de Mussenden.

Sir Cuthbert Quilter and a local committee, aided by the



Part of the gardens at Ascott, Wing, Buckinghamshire, which Mr. and Mrs. Anthony de Rothschild gave to the National Trust in 1950, together with the house and its pictures and porcelain.

Pilgrim trust, transferred the Lavenham guildhall, Suffolk, a fine building of *c.* 1500.

The Treasury transferred to the trust two early 18th-century houses at Wisbech, Cambridgeshire, which they had accepted in lieu of death duties.

Ham house, Richmond, Surrey, with its splendid collection of late-Stuart furniture, was leased to the government and inaugurated as an annexe to the Victoria and Albert museum. Osterley, Middlesex, designed by Robert Adam, with furniture also designed by him, would be similarly opened in 1952. Bodnant gardens, Denbighshire, extending to 60 ac., which are among the finest in the world, were given to the trust by Lord Aberconway and opened to the public on three afternoons a week from Easter Eve to Oct. 31.

Apart from Bodnant gardens, much beautiful land was acquired during the year. In the Lake District the Rev. H. H. Symonds gave 186 ac. beside Langstrath Beck, Borrowdale, and five farms totalling 723 ac. in the Duddon valley. Ashness farm, 719 ac., on the east shore of Derwentwater, was given by Miss E. K. L. Harrop. Legacies were used to buy an adjoining 179 ac. of wood, and also How Hall farm, 772 ac., in Ennerdale. Mrs. C. A. Power-Clutterbuck gave Newark park, on a spur of the Cotswolds, and the Misses Keating gave 117 ac. in Caernarvonshire. Acquisitions in Surrey included Claremont woods, Esher, and Abinger Roughs, near Dorking. In Herefordshire Miss C. E. Symonds bequeathed Pengethly park. In the West Riding Lord Savile gave Hardcastle Crags and H. M. Ingham bequeathed 112 ac. of fine woodland nearby.

The Gowers committee on historic houses paid a tribute to the pioneer work of the trust, advising that its sphere of usefulness should be enlarged. In recommending the setting up of historic buildings councils the committee considered that the trust's country house scheme should be the normal manner of dealing with houses opened to the public when the former owner remained in occupation. (*See* also HISTORIC BUILDINGS.)

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NATSIR (GELAR DATUK SINARO PANDJANG), MOHAMMED, Indonesian politician (b. Alahan Pandjang, West Sumatra, July 17, 1908). Educated at the Dutch secondary school of Bandung, he was for some years director of the Pendidikan Islam, a Moslem teachers' training college, and wrote several Moslem religious books. A leader of the Masjumi (Moslem) party, from March 1946 to June 1947 he was minister of information in the second and third Sjahrir cabinets and from Jan. 1948 to Dec. 1949 occupied the same post in the cabinet of Mohammed Hatta (*q.v.*), which was established after the fall of the Sjarifuddin cabinet. He was a member of the Indonesian delegation to the Mohammed Rum-J. H. van Royen discussions in Indonesia prior to The Hague agreement. On Sept. 7, 1950, he formed the first cabinet of the unitary republic of Indonesia.

NAURU: *see* COMMONWEALTH OF NATIONS; TRUST TERRITORIES.

NAVIES OF THE WORLD. At the end of 1950 only two navies could be considered as first class, namely those of the United States and of Great Britain, the former being three or four times larger than the latter. The fleets of the U.S.S.R., France and Italy could be reckoned as second class, and those of Sweden, the Netherlands, Turkey, Spain, Australia, Canada, Argentina, Brazil and Chile as third class, while the smaller and not so well-balanced navies fell into categories below that. Several of the smaller countries continued to add to their naval strength by acquiring the older or surplus warships of the United States and Great Britain. The relative strengths in ships (of and above the escort vessel categories) of the navies of the world were as shown in the table on p. 460, to which the new navies of Indonesia and Israel, the expanded navy of Egypt and the partly resurrected navy of Japan have been added.

The principal tendencies in the navies of the larger maritime powers in 1950 were the development of radar apparatus and sonar devices, the improvement of anti-submarine and anti-aircraft weapons, the reconstruction and conversion of aircraft carriers to operate larger and faster aircraft, the adaptation of large destroyers as fleet anti-submarine escorts, the conversion of smaller destroyer types into fast A/S frigates or submarine killers, an increase in the speed and underwater endurance of submarines and experiments for the greater efficiency of minesweepers.

NAVIES OF THE WORLD, DEC. 1950

	Fleet Aircraft Carriers	Light Aircraft Carriers	Escort Aircraft Carriers	Battleships	Cruisers	Coast Defence Ships & Monitors	Destroyers	Submarines	Frigates and Escort types
UNITED STATES	28	9	66	15	71	1	351	187	244
GREAT BRITAIN	6	6	1	5	25	2	106	57	162
RUSSIA	—	—	—	3	14	2	70	360	70
FRANCE	—	1	1	2	8	4	17	12	25
ITALY	—	—	—	2	4	—	4	—	38
SWEDEN	—	—	—	—	4	3	13	24	8
NETHERLANDS	—	1	—	—	2	—	5	7	9
TURKEY	—	—	—	—	1*	—	10	11	—
SPAIN	—	—	—	—	6	—	16	6	12
AUSTRALIA	—	1	—	—	3	—	10	—	14
CANADA	—	1	—	—	2	—	11	—	6
ARGENTINA	—	—	—	2	3	1	11	3	11
BRAZIL	—	—	—	1	—	—	9	4	8
CHILE	—	—	—	1	—	2	6	7	6
NEW ZEALAND	—	—	—	—	2	—	—	—	6
PERU	—	—	—	—	2	—	1	4	3
GREECE	—	—	—	—	1	—	2	6	16
INDIA	—	—	—	—	1	—	3	—	5
NORWAY	—	—	—	—	—	—	5	5	10
PORTUGAL	—	—	—	—	—	—	5	6	8
CHINA	—	—	—	—	—	—	7	—	24
PAKISTAN	—	—	—	—	—	—	3	—	4
POLAND	—	—	—	—	—	—	2	4	—
THAILAND	—	—	—	—	—	3	—	4	4
DOMINICAN REP.	—	—	—	—	—	—	2	—	9
RUMANIA	—	—	—	—	—	—	2	1	—
COLOMBIA	—	—	—	—	—	—	2	—	1
SOUTH AFRICA	—	—	—	—	—	—	1	—	3
INDONESIA	—	—	—	—	—	—	1	—	4
EGYPT	—	—	—	—	—	—	—	—	10
DENMARK	—	—	—	—	—	—	—	3	6
YUGOSLAVIA	—	—	—	—	—	—	—	7	3
MEXICO	—	—	—	—	—	—	—	—	8
ISRAEL	—	—	—	—	—	—	—	—	6
VENEZUELA	—	—	—	—	—	—	—	—	6
JAPAN	—	—	—	—	—	—	—	—	5
CUBA	—	—	—	—	—	—	—	—	5
BELGIUM	—	—	—	—	—	—	—	—	2
IRISH REPUBLIC	—	—	—	—	—	—	—	—	3
PERSIA	—	—	—	—	—	—	—	—	2
ECUADOR	—	—	—	—	—	—	—	—	1
BURMA	—	—	—	—	—	—	—	—	1

Other naval forces, not shown in the table because they comprise only minor war vessels, are those of Bulgaria, Ceylon, Finland, Haiti, Honduras, Hungary, Iceland, Iraq, Korea (South), Nicaragua, Panama, Paraguay, Philippines and Uruguay.

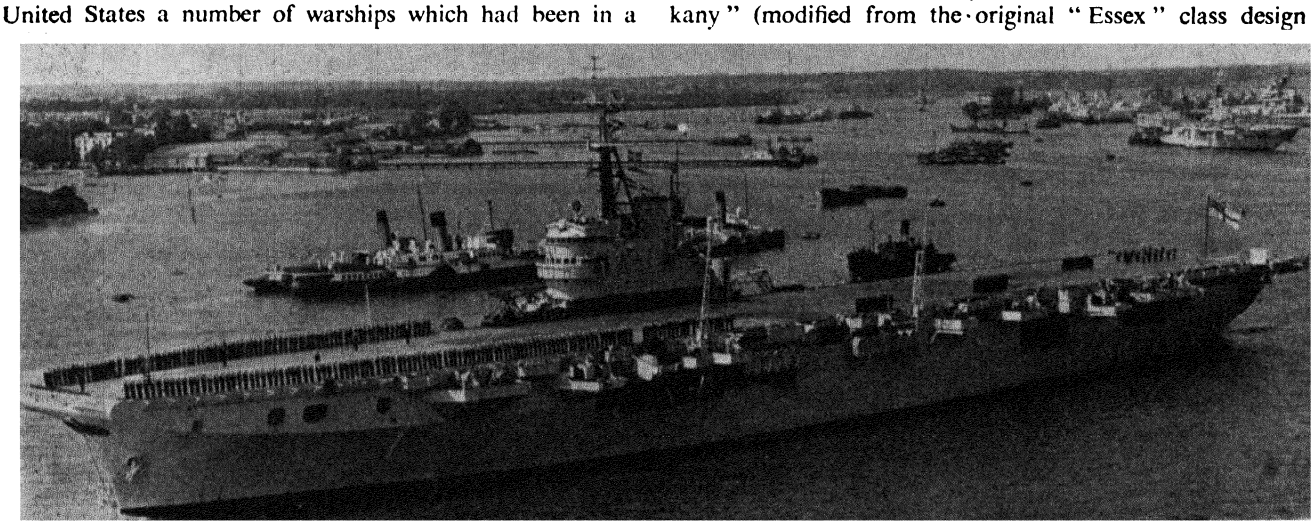
* Battle Cruiser.

Events in the far east gave a slight impetus towards rearmament for the first time since the end of World War II. In the United States a number of warships which had been in a state of preservation were brought back into commission. In Great Britain many reserve ships which had been laid up were brought forward for refit. In both countries new warships, especially smaller types such as anti-submarine escorts and minesweepers, were ordered or projected.

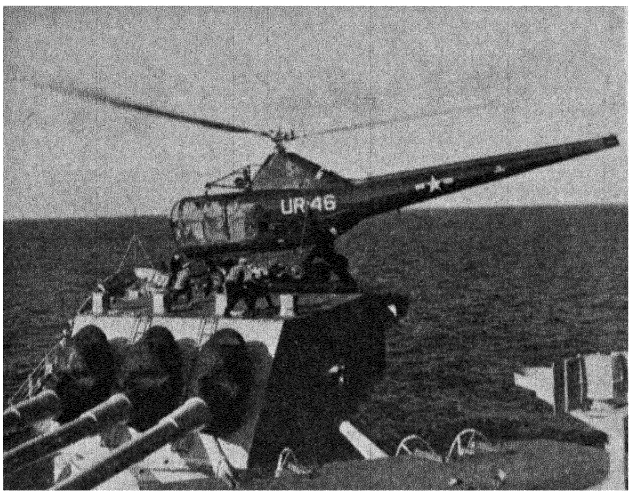
Among the naval events of the year which shocked or stirred the world were the grounding of the U.S. battleship "Missouri" from Jan. 7 until Feb. 1, when she was refloated; the sinking of the British submarine "Truculent" after collision with the Swedish tanker "Divina" in the Thames estuary on Jan. 12, her subsequent salvage on March 14 by the ex-German special lifting vessels "Ausdauer" and "Energie," followed by the Admiralty announcement on April 5 that she would be scrapped; a series of a dozen or more malicious damage incidents and suspected sabotage attempts in British warships and naval shore establishments, including the Bedenham explosions in Portsmouth harbour on July 14; the loss of the French weather-observation frigate "Laplace" which exploded and sank off Cape Frehel after striking a magnetic mine on Sept. 16; and United Nations' naval support in the Korean campaign from mid-year onwards.

The outbreak of war in Korea quickly demonstrated that sea power was as important as ever. Sea-borne supplies soon became a potent factor. Aircraft carriers, naval guns, landing craft and transports were needed. British warships concerned in the Korean campaign included the aircraft carriers "Theseus," "Triumph," "Ocean" and "Warrior," the cruisers "Ceylon," "Belfast," "Jamaica" and "Kenya," the destroyers "Charity," "Cockade," "Comus," "Concord," "Consort," "Constance" and "Cossack," the aircraft maintenance ship "Unicorn" and the frigates "Alacrity," "Alert," "Black Swan," "Cardigan Bay," "Hart," "Mounts Bay," "Morecambe Bay," "St. Bride's Bay" and "Whitesand Bay." Australian warships which took part were the destroyers "Bataan" and "Warramunga" and the frigate "Shoalhaven"; Canadian warships, the destroyers "Athabaskan," "Cayuga" and "Sioux"; and New Zealand warships the frigates "Pukaki" and "Tutira." Many U.S. warships were active in the Korean theatre, but their names were not so readily revealed officially. The U.S. destroyers "Brush" and "Mansfield" struck floating mines off North Korea on Sept. 27 and 30 respectively, but although both ships sustained underwater damage they made port. The U.S. minesweepers "Magpie," on Oct. 1, and "Pirate" and "Pledge," both on Oct. 12, struck floating mines and sank off the Korean east coast.

United States Naval Strength. The aircraft carrier "Oriskany" (modified from the original "Essex" class design



H.M.S. "Theseus" (17,720 tons) leaving Portsmouth in Aug. 1950. For service in Korean waters the ship received the Boyd trophy for 1950 given annually for the finest feat of aviation by an individual or unit of the Royal Navy.



Vice Admiral F. Sherman, commanding the United States 6th fleet, landing by helicopter on a gun turret of U.S.S. "Albany" in April 1950.

while under deferred construction), which had been expected to be ready at the end of 1949, was commissioned on Sept. 25 and was reported to be some 3,000 to 4,000 tons heavier than her 27,100-ton sisters, 12 of which, including the "Essex," "Kearsage," "Lake Champlain" and "Wasp," were scheduled to be converted on similar lines to enable them to operate heavier aircraft. Late in 1950 only one U.S. battleship remained in full commission, namely the "Missouri," which saw action in Korea. The U.S. navy comprised 28 fleet aircraft carriers, 9 light fleet carriers, 66 escort carriers, 15 battleships, 2 large cruisers, 25 heavy cruisers, 44 light cruisers, 351 destroyers, 244 escort destroyers, 187 submarines, 217 minelayers and minesweepers, 176 patrol vessels, 945 amphibious craft, 553 fleet auxiliaries, 1,724 service craft and 74 floating docks, a total of 4,660 vessels, of which 2,150 were in service, the rest in reserve.

British Naval Strength. Late in 1950 there were six fleet aircraft carriers, six light carriers and one escort carrier. The large fleet aircraft carrier "Eagle" was nearing completion, and her sister ship "Ark Royal" was launched on May 3. Little progress had been made with the light fleet carriers "Albion," "Bulwark" and "Centaur," and the remaining ship of the class, the "Hermes," had not been launched. The light carriers "Hercules," "Leviathan" and "Powerful" were still suspended. Of the five surviving battleships none was in operational commission at the end of the year, the "Vanguard" being a training ship and the four of the "King George V" class relegated to reserve, two being laid up in a state of preservation. There were 25 cruisers including one being converted into a trials ship. No building progress was made with the cruisers "Blake," "Defence" and "Tiger." Destroyers numbered 106. Three more of the eight large destroyers of the "Daring" class were launched. There were 162 frigates, not including the "Relentless" and "Rocket," the conversion of which from destroyers was nearing completion. As a result of scrapping, submarines were reduced to 57, not including four "midgets." Other vessels included three fast minelayers, two aircraft maintenance ships, two monitors, 60 fleet minesweepers and many coastal craft, miscellaneous ships and auxiliaries.

Commonwealth. Australia had a compact fleet of 1 light carrier (with a sister ship under construction in Great Britain), 3 cruisers, 10 destroyers (including 2 "Battle" class units completed in 1950 and 5 permanently transferred from Great Britain in June 1950 which were scheduled for conversion to fast anti-submarine escorts), three submarines lent from Great Britain, 14 frigates, 32 fleet minesweepers and a number of small craft and auxiliaries.

Canada also had a well-balanced fleet of 1 light carrier, 2 cruisers, 11 destroyers, a submarine lent from the Royal Navy, 6 frigates (with three more under construction and 4 projected) 9 fleet minesweepers and numerous smaller craft.

U.S.S.R. The construction of one to three battleships of a new powerful type was persistently reported. The total available naval strength at the end of 1950 was 3 battleships, 14 cruisers, 2 coast defence ships, 70 destroyers, approximately 360 submarines, 70 escort vessels and numerous minelayers, minesweepers, patrol vessels, torpedo boats and auxiliaries. On Feb. 25, by decree of the Soviet government, there was created a new independent Ministry of the Navy no longer dependent on the Ministry of Armed Forces.

France. The battleship "Jean Bart" was completed, but the construction of the cruiser "De Grasse" was still suspended for financial reasons and pending the study of new anti-aircraft equipment. The fleet comprised 1 light carrier, 1 escort carrier, 2 battleships, 8 cruisers, 4 coast defence ships, 17 destroyers, 12 submarines, 25 frigates and escort vessels and numerous patrol vessels, miscellaneous ships and auxiliaries.

Italy. The fleet remained at the strength of 2 battleships, 4 cruisers, 4 destroyers, 16 torpedo boats and 20 corvettes, with a number of escort types, minesweepers and auxiliaries, all that was allowed under the peace treaty until Jan. 1, 1950.

Other European Countries. Sweden had 4 cruisers, 3 coast defence ships, 13 destroyers, 2 older destroyers being converted into anti-submarine frigates, 6 torpedo boats (smaller destroyer type), 24 submarines, 2 minelayers and numerous other vessels.

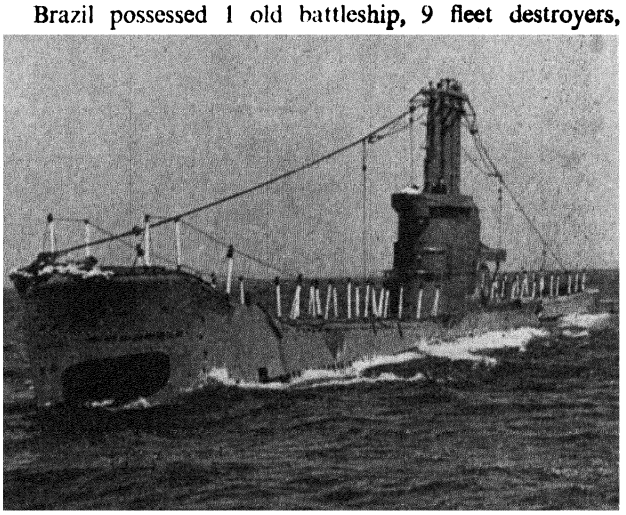
The Netherlands had a well-balanced fleet of 1 light carrier, 2 cruisers, 5 destroyers, 7 submarines, 7 frigates (including 6 destroyer escorts acquired from the United States in 1950), 2 large gunboats and a number of other warships.

Spain had 6 cruisers, 16 destroyers, 6 submarines, 12 sloops or gunboats, 6 minelayers and 7 fleet minesweepers, as well as many minor warships and auxiliaries.

Turkey possessed 1 old battle cruiser, "Yavuz," the only warship of this category remaining in the world, 10 destroyers, 11 submarines (including 2 more acquired from the United States in 1950) and numerous other warships and auxiliaries.

South America. Argentine had 2 old battleships, 3 cruisers, 1 coast defence ship, 11 destroyers, 3 submarines, 4 escort destroyers, 5 frigates, 2 patrol vessels, 11 minesweepers, and other craft.

Brazil possessed 1 old battleship, 9 fleet destroyers, 4



H.M.S. "Artemis" which demonstrated the "snort" breathing apparatus housed abaft the periscopes at Portsmouth in 1950.

submarines, 8 frigates (escort destroyers), 6 trawler type corvettes, 8 submarine-chasers and numerous smaller craft.

Chile had 1 old battleship, 2 coast defence ships (including an obsolete cruiser), 6 destroyers, 7 submarines, 6 frigates and a number of small craft, miscellaneous ships and auxiliaries.

Modern Types of Warships. The principal types of modern warships in the navies of the world were as follows :

Fleet Aircraft Carriers. " Midway " (U.S.), 45,000 tons, fourteen 5-in. guns, 137 aircraft, 200,000 s.h.p., 33 knots; " Essex " (U.S.), 27,100 tons, ten 5-in. guns, 90 aircraft, 150,000 s.p.h., 33 knots; " Implacable " (British), 26,000 tons, 60 aircraft, sixteen 4·5-in. guns, 148,000 s.h.p., 32 knots.

Light Fleet Aircraft Carriers. "Saipan" (U.S.), 14,500 tons, 50 aircraft, light guns, 120,000 s.h.p., 33 knots; " Theseus " (British), 13,350 tons, 40 aircraft, light guns, 40,000 s.h.p., 25 knots; " Belleau Wood " (U.S.), 11,000 tons, 45 aircraft, light guns, 100,000 s.h.p., 32 knots.

Battleships. " Iowa " (U.S.), 45,000 tons, nine 16-in., twenty 5-in. guns, 200,000 s.h.p., 33 knots; " Vanguard " (British), 44,500 tons, eight 15-in., sixteen 5·25-in. guns, 130,000 s.h.p., 30 knots; " South Dakota " (U.S.) 35,000 tons, nine 16-in., twenty 5-in. guns, 130,000 s.h.p., 28 knots; " Jean Bart " (French), 35,000 tons, eight 15-in., nine 6-in. guns, 150,000 s.h.p., 30 knots; " King George V " (British), 35,000 tons, ten 14-in., sixteen 5·25-in. guns, 110,000 s.h.p., 28·5 knots.

Large Cruisers. " Alaska " (U.S.), 27,500 tons, nine 12-in., twelve 5-in. guns, 150,000 s.h.p., 33 knots.

Heavy Cruisers. " Des Moines " (U.S.), 17,000 tons, nine 8-in., twelve 5-in. guns, 120,000 s.h.p., 33 knots; " Oregon City " (U.S.), 13,700 tons, nine 8-in., twelve 5-in. guns, 120,000 s.h.p., 33 knots.

Light Cruisers. " Worcester " (U.S.), 14,700 tons, twelve 6-in. twenty 3-in. guns, 120,000 s.h.p., 32 knots; " Fargo " (U.S.), 10,000 tons, twelve 6-in., twelve 5-in. guns, 100,000 s.h.p., 33 knots; " Superb " (British), 8,000 tons, nine 6-in., ten 4-in. guns, 72,500 s.h.p., 31·5 knots; " Tre Kronor " (Swedish), 7,400 tons, seven 6-in. guns, 100,000 s.h.p., 33 knots; " Juneau " (U.S.), 6,000 tons, twelve 5-in. guns, 75,000 s.h.p., 35 knots; " Diadem " (British), 5,900 tons, eight 5·25-in. guns, 62,000 s.h.p., 32 knots.

Destroyers. " Gearing " (U.S.), 2,425 tons, six 5-in. guns, 60,000 s.h.p., 35 knots; " Jutland " (British), 2,400 tons, five 4·5-in. guns, 50,000 s.h.p., 34 knots; " Sumner " (U.S.), 2,200 tons, six 5-in. guns, 60,000 s.h.p., 34 knots; " Battle-axe " (British), 1,980 tons, four 4-in. guns, 40,000 s.h.p., 31 knots; " Öland " (Swedish), 1,880 tons, four 4·7-in. guns, 44,000 s.h.p., 35 knots.

Submarines. " Tench " (U.S.), 1,570 tons, one 5-in. gun, ten 21-in. torpedo tubes, 6,500 h.p., 20 knots (surface); " Amphion " (British), 1,120 tons, one 4-in. gun, ten 21-in. torpedo tubes, 4,300 h.p., 18 knots (surface); " Créole " (French), 820 tons, one 3·5-in. gun, ten 21·7-in. torpedo tubes, 3,000 h.p., 17 knots (surface); " K-1 " (Russian), 1,500 tons, two 4-in. guns, ten 21-in. torpedo tubes, 18 knots (surface).

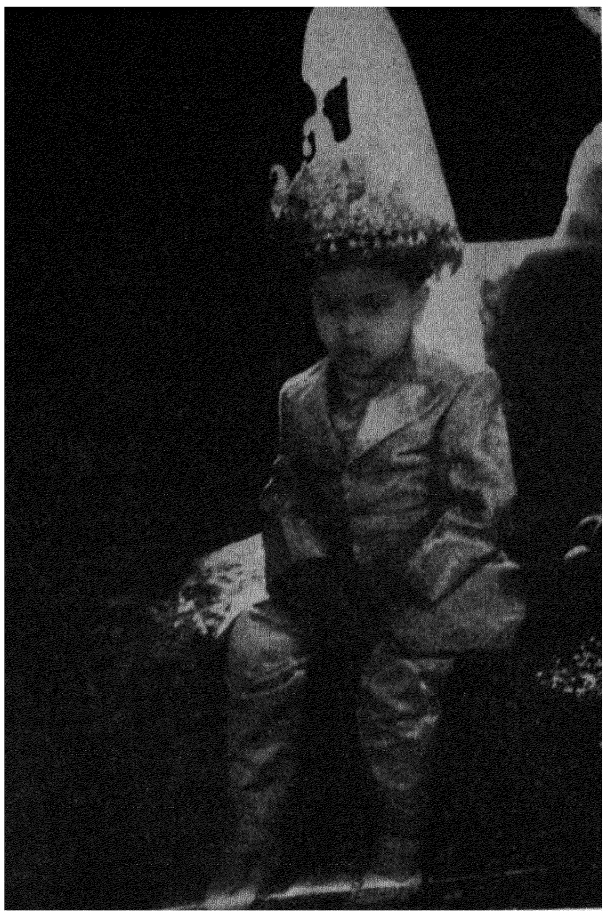
Frigates. " Mounts Bay " (British), 1,600 tons, four 4-in. guns, 5,500 i.h.p., 19 knots; " Rudderow " (U.S.), 1,450 tons, two 5-in. guns, 12,000 s.h.p., 24 knots; " Amethyst " (British), 1,490 tons, six 4-in. guns, 4,300 s.h.p., 18 knots; " Edsall " (U.S.), 1,200 tons, three 3-in. guns, 6,000 b.h.p., 21 knots; " Brecon " (British), 1,175 tons, six 4-in. guns, three 21-in. torpedo tubes, 19,000 s.h.p., 25 knots. (*See* also ROYAL NAVY.) (R. V. B. B.)

NEHRU, JAWAHARLAL, Indian statesman (b. Allahabad, United Provinces, Nov. 14, 1889). For his earlier career see *Encyclopædia Britannica*. Arrested in Aug. 1942, following the Congress party's call for civil disobedience, Nehru was released in June 1945 and took a leading part in the negotiations with the British cabinet mission in March 1946. In May 1947 he was elected Congress party president and later leader of the first all-Indian executive council (the " caretaker government "). On Aug. 15, 1947, when the Indian sub-continent was partitioned he became prime minister of India, also holding the portfolios of external affairs and scientific research. In April 1949 he took part in the Commonwealth conference which evolved a formula whereby India could become a republic and at the same time remain within the Commonwealth.

In Jan. 1950 he attended the first Commonwealth Foreign Ministers' conference at Colombo, and was given an honorary doctorate of laws by the University of Ceylon. In February he received the Nepalese prime minister. Meanwhile outbreaks of communal violence in Bengal had become very severe and the Indian prime minister visited Calcutta twice in March to study the situation. The Indo-Pakistan minorities agreement was signed by Nehru and Liaquat Ali Khan (*q.v.*) on April 8. Later Nehru visited Karachi for further talks. On May 5, following resignations over the minorities agreement, he re-formed his cabinet. In June he visited Indonesia and Singapore. In May and July he took part in talks with Sir Owen Dixon (*q.v.*), U.N. mediator for Kashmir; at a press conference in August, however, he put the blame " one hundred per cent on Pakistan " for the Kashmir trouble. In September he visited areas of Assam which had been ravaged by earthquakes (*see* DISASTERS). He addressed the 11th Conference of the Institute of Pacific Relations at Lucknow in October, in which month he joined the Congress working committee. In November he refused nomination as a candidate for the chancellorship of Cambridge university. On the outbreak of the Korean war he sent peace appeals to Joseph Stalin and Dean Acheson (*qq.v.*), and later urged that U.N. troops should not advance north of the 38th parallel and that Communist China should be admitted to discussions on Korea.

NEPAL. Independent kingdom in the Himalayas, lying between India and Tibet. Area: *c.* 54,000 sq.mi. Pop. (no census ever taken, 1948 est.): 6,910,000. Aboriginal stock is Mongolian with important Indo-Aryan admixture. Language: Gorkhalis, or Gurkhas, speak Parbatia, of Sanskrit origin; Bothias use Tibetan; Newars, who came from southern India, speak Gubhajius, resembling Tibetan but with many Sanskrit words. Religion: Buddhism mixed with Hinduism. Capital, Kathmandu (pop. *c.* 110,000). The ruling family are Hindu Rajputs. Rulers in 1950, Tribhuvana Bir Bikram Jung Bahadur and, from Nov. 7, Gyanendra Jung Bahadur Rana; prime minister and supreme commander in chief, Sir Mohan Shumshere Jung Bahadur Rana.

History. Although the relations between the exiled members of the ruling Rana family with the hereditary prime minister, who was also a member of that family, had been unfriendly and that the formation of the Nepalese Congress (which had actually taken place in India) was giving some anxiety to the prime minister, the political explosion in Nepal came as a shock to India as well as to the United Kingdom; both were materially interested in the stability of Nepal because in their armies they had under a tripartite agreement some valuable battalions of Gurkhas. The trouble took a dramatic turn when the king of Nepal, whose office since 1846 had been that of a *roi fainéant*, sought refuge with his family in the Indian embassy at Kathmandu. This dramatic move was followed the next day, Nov. 7, by an emergency session of the Nepalese parliament unanimously proclaiming the second son of the crown prince, a boy three years old, as the new king. The deposed



Gyanendra Jung Bahadur, aged three, who was proclaimed king of Nepal on Nov. 7, 1950, in succession to his grandfather, Tribhuvana Bir Bikram Jung Bahadur.

king left by air for Delhi, where he arrived on Nov. 11 with his family, including the crown prince, and household. On Nov. 10, armed supporters of the Nepalese Congress crossed the frontiers and occupied Birganj after a brief fight with the government troops. The leader of the insurgents was said to be Major-General Subarna Shumshere Jung Bahadur Rana, one of the exiled Ranas, and his action was interpreted as being in sympathy with the refugee king. The insurgents were reported to have set up a provisional government, to have seized money from the treasury at Birganj and to have sent the governor away under arrest to Raxaul, in Bihar.

The president of India received the refugee king of Nepal on Nov. 13, and the next day announced that his government desired to respect the independence of and maintain friendly relations with Nepal and see its people achieve political and economic progress. The government of India also put a strong ban on movements of troops and arms across the frontiers in order to maintain a correct attitude, despite the fact that many Indian politicians did not conceal their sympathy with the insurgents.

The fact that Nepal supplied 12 battalions of Gurkhas to the Indian army and six to the British and that the country, being completely landlocked, drew all its supplies of manufactured goods, munitions of war and even salt from India complicated the situation. The question of recognizing the boy King Gyanendra and deciding the future position of his exiled grandfather Tribhuvana gave both the Indian and the British governments considerable anxiety. (E. HD.)

Foreign Trade. (1944-45) imports 32,520,000 Nep. rupees; exports 37,376,000 Nep. rupees. Principal imports: cattle, sheep, goats, salt, spices, sugar, tobacco, drugs and dyes. Principal exports: cattle, hides and skins, opium and drugs, gums, resins and dyes.

Transport and Communications. Roads (1949): 237 mi. suitable for motor vehicles. Licensed motor vehicles (Dec. 1948): cars 227, commercial motor vehicles 88.

Finance and Banking. Estimated gross revenue 12,500,000 Nepal rupees. Monetary unit: Nepal *rupee* with an exchange rate (Dec. 1949) of 13·37 Nepal rupees to the pound.

NERVOUS SYSTEM. In June 1950 Reynold A. Jensen reported that scientists were just beginning to understand how devastating parental anxieties, whatever their source, were to the child's peace of mind. He further declared that many factors could be responsible for this state of affairs, such as the radio, magazines, newspapers and books on child-rearing. The books were contributory to the parents' feeling of inadequacy. These ideas were often reinforced by the conflicting opinions of "experts" regarding child-rearing. A study in a well-known baby clinic revealed that 52 mothers out of 57 had complaints regarding their babies. In three of the remaining five mothers, maternal anxieties were interfering with the emotional development of the child. These mothers carried over in their relationships with their children unresolved conflicts in their relationships with their own mothers. Mental health in the children was made much more adjustable to their ecology if the parental insecurity was early recognized and treated.

A clinical study was made in the early part of the year on melancholia and revealed 52 cases treated for various and sundry diseases and not for melancholia. The patients with this syndrome were treated from 3 to 36 months after the onset of the illness and before the diagnosis of melancholia was made. The failure to recognize the nature of the illness of these persons caused considerable difficulties in the home and business life of the patients and called for the unnecessary expenditure of money. Further, this treatment exposed these persons to many attempts at self-destruction. The prime reason for this study was to call the attention of the medical practitioners to these problems so that this syndrome would be recognized early, as treatment of melancholia results in an almost 100% recovery. The following signs of melancholia were found in this group of patients: (1) psychomotor retardation (slowness in walking, talking and response to questions); (2) no clouding of consciousness; (3) staring expression with glassy eye appearance and masked facial expression. The symptoms were anorexia, loss in weight, sleeplessness, nervousness (tension, agitation and panic), ideas of self-depreciation and self-accusation and, last but not least, the patients felt better in the late afternoon and evening. The above signs and symptoms were found in no disease except melancholia. Of these 50 cases, 48 made a complete recovery. (*See* also PHYSIOLOGY.)

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NETHERLANDS. Kingdom of northwest Europe, bounded N. and W. by the North sea, E. by Germany and S. by Belgium. Area: 12,868 sq.mi. (not including the waterways and sheets of water larger than 185 ac. and minor acquisitions along the German frontier). Pop.: (1930 census) 7,935,565; (mid-1949 est.) 9,955,394. Language: Dutch. Religion (1947): Roman Catholic 38·50%, Dutch Reformed 31·03%, Reformed Churches 7·93%, non-church members 17·04%. Chief towns (pop., 1949 est.): Amsterdam (cap., 832,583); Rotterdam (671,901); The Hague (555,339); Utrecht (191,811); Haarlem (161,380); Eindhoven (139,320). Ruler, Queen Juliana; prime minister Willem Drees.

History. The transfer of sovereignty to Indonesia at the end of 1949 left the political status of western New Guinea to be settled by negotiation between the Netherlands and the new sovereign republic of Indonesia within a year. With



Mohammed Rum, the first Indonesian high commissioner to the Netherlands, inspecting the guard of honour at the royal palace, Amsterdam, Feb. 1950.

Dutch sovereignty continuing in the meantime, S. L. J. van Waardenburg was appointed Netherlands governor of the area early in Jan. 1950. New methods of administration were introduced at the same time: a co-legislative New Guinea council, a judicial council and a number of lesser advisory bodies were established in the island, the arrangements following the general lines of the former Netherlands Indies constitution. (*See* also NETHERLANDS OVERSEAS TERRITORIES.)

Participation in western defence was made formal on Jan. 27 by the signature, in Washington, of the mutual defence assistance agreement between the United States and the Netherlands.

On April 12 D. U. Stikker, who had combined his post of Netherlands minister of foreign affairs with the office of political conciliator of O.E.E.C. in Paris since the first days of February, was elected to the chairmanship of the organization. At home, to make up for the partial loss of his services, the Foreign Office was strengthened by the appointment of N. S. Blom as secretary of state serving as right-hand man of the minister.

The Netherlands took part in the Paris conference on the Schuman plan in June but would not be committed to the carrying out of the plan as it stood without amendment, thereby assuming a position between that of Great Britain and full acceptance of the Schuman proposals.

The destroyer " Jan Evertsen " was ordered to Korea on July 6 as part of the Netherlands contribution to the United Nations forces. The creation of three new divisions to increase the country's defensive strength was announced in the first week of August. Recruiting of volunteers for a Dutch contingent in Korea began a few days later, and resulted in the embarkation on Oct. 26 of a detachment of 650 men. In the middle of August 4,000 men who had been released in March after six months partial training were recalled to the colours to complete their training.

A further extension of the country's military effort was announced on Sept. 7 in the form of supplementary estimates amounting to Fl. 150 million to be added to the original sum of Fl. 859 million in the 1951 budget. At the same time the government fixed the figure of 12,500 as the target number of recruits for the national reserve to be ready by the spring of 1951. It was also decided to create a defence council, to consist of the secretaries of state for defence and the navy, the secretaries general of both departments, and the chiefs of staff of the army, the navy and the air force under the chairmanship of the minister of defence. On the occasion of the parliamentary debates on the new defence measures, the responsible minister, W. F. Schokking, came under lively criticism in the Lower Chamber, in consequence of which he tendered his resignation a few weeks later and on Oct. 11 was succeeded by H. L. s'Jacob.

The provincial council elections in April left the main political parties in much the same situation as before. The Catholic People's party increased its poll slightly, from 31·42% of the votes cast to 31·57%; the Labour party poll declined, equally slightly, from 25·81 to 25·69%; some of the small parties registered individually insignificant gains, all at the cost of the Communists whose votes decreased even in their stronghold of Amsterdam from 31·50 to 24·60%.

Early in September the government approved an all-round increase of 5% in wages for both male and female workers above the age of 23; also for those under 23 if they were married or were the main support of their family. To counteract inflationary tendencies the bank rate was raised on Sept. 26 from 2½% to 3%, and this was followed early in November by certain restrictions upon the commercial banks' freedom to use treasury paper as cover for their advances to industrial concerns.

Prince Bernhard left Rotterdam aboard the aircraft carrier " Kaarel Doorman " on Jan. 2 for a goodwill tour through the Dutch West Indies in the course of which he also paid short visits also to Brazil, Argentina and Mexico. On the homeward journey he went to Washington to see President Harry S. Truman, and, after this, to Quebec before returning to Holland by air. He arrived back at Schiphol on March 19.



Princess Irene laying the foundation stone of the Dutch Church of Austin Friars, London, July 1950. The church had been destroyed during an air-raid in 1940.

Official state visits were paid by Queen Juliana and Prince Bernhard to Paris (May 23-26) and to London (Nov. 21-24).

(F. H. Aw.)

Education. Schools (1948): elementary 7,044, pupils 1,164,762, teachers 34,353; secondary 1,366, pupils 228,033, teachers 11,393; technical 831, pupils 219,173; agricultural (1947) 236, pupils 50,380; teachers' training colleges 89, students 7,246, teachers 1,006; universities and institutions of higher education 10, students 26,379, professors and lecturers 1,057.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 425 (320); barley 189; oats 424; rye 517 (450); potatoes 4,605; sugar, raw value 286 (360); dry peas 67; broad beans 12; flax fibre 20·8; linseed 18; rapeseed 59. Livestock ('000 head): cattle (Dec. 1949) 2,517; sheep (May 1948) 425; pigs (Dec. 1949) 1,158; horses (May 1949) 304. Meat production ('000 metric tons, 1948; 1949 in brackets): total 177 (288) of which beef and veal 79. Dairy production ('000 metric tons, 1949): milk, delivered, 4,428; factory butter 84; cheese 128. Fisheries: total catch (1949) 235,800 metric tons.

Industry. (1948) Industrial establishments 115,580; persons employed 1,227,297. Fuel and power (1949, 1950, six months, in brackets): coal ('000 metric tons) 11,700 (6,099); lignite 204 (96); manufactured gas (million cu. metres) 1,452 (794); electricity (million kwh.) 4,680 (2,596); crude oil ('000 metric tons) 621 (361). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): pig iron 434 (246); salt 335 (184); tin metal 19·6 (11·8); slab zinc 15·6. Manufactured goods ('000 metric tons, 1949; 1950, six months, in brackets): cotton yarn 55·2 (29·9); rayon filament yarn 19·2 (10·4); rayon staple fibre 10·1 (5·1); cement 565 (269); building bricks (millions) 1,084 (572); wool yarn 27 (14); leather boots and shoes (1948) 11,501,000 pairs. Number of cycles manufactured (1948) 370,000.

Foreign Trade. (Million florins, 1949; 1950, six months, in brackets) import 5,352 (3,755); export 3,852 (2,324). Main sources of imports (1949): U.S. 16·5%; Belgium-Luxembourg 14·3%; U.K. 11·0%; Indonesia 7·7%; France 7·0%. Main destinations of exports: U.K. 16·2%; Belgium-Luxembourg 13·4%; Germany 10·8%; Indonesia 10·3%; France 7·0%. Main imports (1948): cereals, seeds, pulses and flour 10·4%; vehicles, parts, tyres 6·3%; rolled iron and tinplate 5·4%; yarn, rope and fabrics 5·3%. Main exports (1948); yarn, rope and fabrics 11·6%; milk, dairy products and eggs 10·6%; electro-technical machinery and apparatus 7·1%; fresh and preserved vegetables and fruit 2·8%.

Transport and Communications. Railways (1948): 2,080 mi.; passenger-mi. (1949) 4,019 million; freight net ton-mi. (1949) 1,730 millions; freight carried ('000 tons, 1949) 19,860. Roads (Jan. 1949): main 1,724 mi.; secondary 2,694 mi.; third class 3,257 mi. Licensed motor vehicles (Dec. 1949): cars 110,612; commercial 73,719. Shipping (July, 1949): merchant vessels over 100 gross tons 1,501; total tonnage 2,994,399. Air transport (1949): passenger-mi. 377 million; cargo net ton-mi. 14 million. Telephones (1947): subscribers 575,995. Wireless licences (Sept. 1950): 1,439,202.

Finance and Banking. (Million florins) ordinary budget: (1950 actual) revenue 3,899, expenditure 3,201; (1951 est.) revenue 3,678, expenditure 2,594. National debt, excluding war damage compensation, which was Fl. 3,261 million in Dec. 1948, (Dec. 1948; Dec. 1949 in brackets): 22,451 (23,316). Currency circulation (July 1949; July 1950 in brackets): 3,071 (2,949). Gold reserve and foreign exchange of Central bank (Aug. 1949; Aug. 1950 in brackets): 386 (551) million U.S. dollars. Bank Deposits (July 1949; July 1950 in brackets): 4,165 (4,189). Monetary unit: *florin* or *guilder* with an exchange rate Fl. 10·64 to the pound and Fl. 3·80½ to the U.S. dollar.

See Cicely Hamilton, *Holland Today* (London, 1950).

NETHERLANDS OVERSEAS TERRITORIES.

Under this heading are grouped the overseas territories of Dutch New Guinea, Dutch Guiana or Surinam and the Netherlands Antilles. Their total area is approximately 206,783 sq.mi. and the total population over 1,350,000.

Dutch New Guinea. The western part of this second largest island of the world, with smaller adjacent islands, forms part of the territory of the kingdom of the Netherlands. Area: approximately 153,000 sq.mi. Pop.: approximately 1,000,000 of whom 275,000 were administered by the Dutch; of these 90,000 were Roman Catholic and 70,000 Protestant. The Papuans are the dominant stock in New Guinea, but there are also Melanesian and Negrito elements. Principal towns: Hollandia (cap.), Manokwari, Sorong and Meranke. Governor, S. L. J. van Waardenburg.

Formal occupation of New Guinea by the Netherlands began in 1828, but until 1898 direct measures to administer the territory were few and far between. From the last-mentioned date onwards the country formed part of the regular administration of the Netherlands East Indies, as an annex to the Moluccas. The Round Table conference in The Hague between the Netherlands and Indonesia in 1949, covering the transfer of sovereignty over the territory of the N.E.I. to the republic of the United States of Indonesia, decided to maintain the *status quo* of New Guinea with the stipulation that within a year the question of the political status of this territory was to be determined through negotiations between the two countries.

To prepare a decision a joint commission was set up in March 1950, but the Indonesian and Dutch members arrived at diametrically opposed conclusions. The Indonesian standpoint was based mainly on the political argument that transfer of Irian (as New Guinea was called by them) was only a logical sequence of the transfer of sovereignty over the former N.E.I. of which it had formed an administrative part, and that no remaining " colony " of Holland could be tolerated in the vicinity. The Dutch argument was that from the geographical, ethnological and social viewpoints New Guinea had no connections with Indonesia and the rest of Asia, but was to be considered as a part of the Pacific, in particular the Australian sphere; moreover that the interests of the mainly primitive Papuan population demanded a prolonged period of Netherlands tutelage, as defined in article 73 of the U.N. charter, for education towards self-government and self-determination at a later date.

The Indonesian claims were reinforced at home by violent agitation for its annexation, combined with the threat of reprisals against Dutch nationals and interests in Indonesia in case sovereignty was not transferred before Jan. 1, 1951, but found no active political support abroad and clashed against the openly declared intention of the government of Australia not to allow any Indonesian territorial encroachments on New Guinea. A conference between the Netherlands and Indonesian governments to deal with the issue was scheduled for Dec. 4 but was suspended on Dec. 15 for lack of a mutually acceptable basis.

As a last endeavour to prevent the apparent deadlock the Netherlands delegation proposed to transfer sovereignty over New Guinea to the Netherlands-Indonesia union and to establish a New Guinea council, in which the Netherlands and Indonesia would be represented on an equal footing; the council would issue the directives for the administration of the territory. In case Indonesia should reject this compromise, the Netherlands government proposed to continue negotiations on the New Guinea problem, as an undecided point left by the Round Table conference in 1949, with the assistance of the U.N. commission for Indonesia or another body which could offer its good offices to both parties. The Indonesian delegation, however, adhering to its doctrine that New Guinea was part of Indonesian territory anyway, rejected the compromise proposal. As a result the conference ended in deadlock on Dec. 27 and the *status quo*, that is Netherlands sovereignty and administration, continued.

In the absence of any considerable local labour reserves, marked fertility of the soil or notable mineral resources, the economic prospects of western New Guinea seemed rather poor. A possible exception was the western tip of the island, where discoveries of oil had been made. These deposits were developed by the Netherlands New Guinea Oil company, established in 1935, jointly owned by affiliates of the Royal Dutch Shell, Standard-Vacuum and Caltex groups, and operated locally by a Royal Dutch affiliate established at Sorong. The Klamono field eastwards of this harbour produced about 4,700 bbl. of crude oil daily. Apart from this area, economic development in future would have to depend mainly on grants from the Netherlands treasury and perhaps funds to be made available under the U.S. programme of

financial and technical assistance to underdeveloped countries. (*See* also PAPUA-NEW GUINEA.) (W. G. P.)

Netherlands Antilles. Group of six islands in the West Indies. Total area: 403 sq.mi. Total pop. (1950 est.): 165,000, of which more than one quarter are aliens. Three islands lie near Venezuela, Curaçao (210 sq.mi.), Bonaire (95 sq.mi.) and Aruba (69 sq.mi.); three others, sparsely populated, lie 500 mi. to the northeast—the southern portion of St. Martin (17 sq.mi.), St. Eustatius (7 sq.mi.) and Saba (5 sq.mi.). The official language is Dutch, but a local patois of diverse origin is equally widespread. Religion: mainly Roman Catholic. Capital and largest city, Willemstad, Curaçao (pop., 1950 est., 47,000). Governor, L. A. H. Peters.

At the end of Sept. 1950 the new constitution, provisional in character, was authorized by the Netherlands parliament. A considerable measure of responsibility for local government was delegated to the Antilles parliament, with veto power reserved to the governor only in issues affecting the sovereign rights of the crown. The fiscal and monetary powers of the colonial parliament, as in the case of Surinam, were extensive. The friction between Aruba and Curaçao, which had marked the life of the colonial legislature, continued throughout the discussion at The Hague of the new constitution, since Aruba was allotted only 8 seats to Curaçao's 12, the other islands retaining the same minimum representation they previously had. (C. McG.)

Education. Schools (1950) elementary 48, pupils 15,926; higher elementary 30, pupils 11,501; secondary 2, pupils 363.

Foreign Trade. (1949) exports Fl. 827 million; imports Fl. 963 million. More than 97% of the exports consisted of petroleum products and 80% of the imports consisted of crude petroleum from Venezuela. Total imports of crude petroleum amounted to 37·8 million metric tons. The three refineries produced 34,210,000 metric tons of refined petroleum products, including 26,732 tons of heavy oils and 5,326,000 tons of petrol. Phosphate deposits produced for export (1949) 92,584 metric tons of rock phosphate and 200 tons of fine ground phosphate.

Finance. The monetary unit is the Netherlands Antilles guilder or florin valued at U.S. $0·53. Budget (1950 est.): revenue Fl. 57,289,635; expenditure Fl. 57,289,393. Notes in circulation (Dec. 31, 1949): Fl. 34,159,000; gold reserve Fl. 35,518,000. (J. W. Mw.)

Surinam (Dutch Guiana). Lying in northeastern South America between French Guiana to the E. and British Guiana to the W. Surinam occupies 54,291 sq.mi. Pop. (1950 est.): 192,000 including about 85,000 indigenous and mixtures of indigenous and European elements, about 20,000 Afro-Americans, 35,000 Javanese and more than 50,000 who were either born in India or descended from persons born there. Barely 2,000 of the inhabitants were born in Europe. The official language is Dutch, but other languages and dialects are widely used. Capital, Paramaribo (pop., 1946 est., 71,000). Governor, J. Klaasesz.

A new constitution was promulgated on Jan. 20, 1950. The responsibility for governing the colony formally passed from the colonial ministry in The Hague to a cabinet of nine members responsible to the legislature. The Dutch government continued to supervise the foreign relations of the colony, and to assure its defence against aggression. The cabinet initially selected was, by the end of the year, after some readjustments slowly and carefully making its way toward some programme for national development. Julius de Miranda, who served as Surinam's first prime minister, resigned on Dec. 28. (C. McG.)

Education. Schools (Jan. 1, 1949): primary 129, teachers 773, pupils 31,463.

Foreign Trade. (1949) exports Fl. 34,077,650; imports Fl. 37,812,004. Chief exports: bauxite (74%), rice (9%), citrus fruit (3%). Principal customers: U.S. (75%); the Netherlands (23%). Chief suppliers: U.S. (52%); the Netherlands (26%). Production figures in 1949 included (short tons): bauxite 2,382,715; balata 61; sugar 4,850; rice 33,050; coffee 385; gold 3,793 oz.

Finance. The monetary unit is the Surinam guilder or florin, valued at U.S.$0·53. Budget (1950 est): Fl. 19,845,200; expenditure Fl. 20,544,793. Notes in circulation (Dec. 31, 1949): Fl. 11,796,900. (J. W. Mw.)

NEW CALEDONIA: *see* PACIFIC ISLANDS, FRENCH.

NEW DELHI, Capital of India, Population, including the old city: (1941 census) 521,849.

On Jan. 26, 1950, New Delhi gained a new importance by becoming the capital city of the first republic within the Commonwealth. This further step in India's independence was celebrated with illuminations, flag-hoisting ceremonies, a full-scale military parade and a state drive by the republic's first president, Rajendra Prasad. Increasing importance was not accompanied by increased building and, throughout the year, housing difficulties continued to affect every level of the population. Progress was, however, made towards completion of satellite towns for displaced persons and, for the first time since 1947, the city's shopping centre was cleared entirely of refugee hawkers and pavement traders. Local production of prefabricated houses began in August and by 1951 would help to relieve congestion. Headway was also made in levelling and draining the special building site set aside for a diplomatic district, where it was hoped eventually to accommodate all the foreign missions. At the close of 1950, these numbered 18 embassies, 13 legations and 5 high commissions.

New Delhi could boast no theatre or concert hall and a cinema stage was called into use for the visit of an English theatrical company, whose six-day programme of scenes from Shakespeare was a great occasion in the entertainment world. A permanent exhibition of historic interest remained at government house, pending the construction of a national museum, while the All India Fine Arts and Crafts society continued to make use of a temporary wartime building for their fortnightly exhibitions of paintings by contemporary Indian artists. A National Physical laboratory was opened in January and a Road Research institute in September. A trade fair, known as the Manufacturers' Industrial exhibition was held in March and included exhibits from the U.S., Great Britain, Australia, Canada, France, Sweden and Japan. (E. B. K.)

NEWFOUNDLAND: *see* CANADA.

NEW GUINEA: *see* COMMONWEALTH OF NATIONS; INDONESIA; NETHERLANDS OVERSEAS TERRITORIES; PAPUA-NEW GUINEA; TRUST TERRITORIES.

NEW HEBRIDES. Group of some 30 islands, and many islets and rocks, in the western Pacific, from 1906 jointly administered as an Anglo-French condominium. Total area: about 5,700 sq.mi. Pop.: Melanesian with some admixture of Polynesian blood (1937 est.) 43,000; (1947 est.) 47,301, including 245 British and 667 French. Religion: mainly pagan. Capital, Vila (pop., 1,200). Resident commissioners: British, R. D. Blandy; French, P. Anthonioz. Both are subordinate to their respective superiors: Sir Leslie Brian Freeston, British high commissioner for the western Pacific, and Pierre Cournarie, French commissioner general for the Pacific ocean.

The islands continued to experience an acute shortage of manpower resulting from ravages among the Natives attributable to European colonization.

Agriculture. Main crops (1949, metric tons): copra 21,000; coffee 100; cocoa 800.

Foreign Trade. (£ sterling, 1947; 1948 in brackets) import 400,512 (520,000); export 988,609 (1,498,152).

Finance. British sterling and French (metropolitan and C.F.P.) are both legal tender. Common budget (£ sterling, actual, 1947; 1948 in brackets): revenue 83,080 (96,440); expenditure 49,092 (83,691). These figures exclude entirely revenue and expenditure from the British and French national services. (C. A. J.)

NEWSPAPERS AND MAGAZINES. The year 1950 was a difficult one for the British press. The shortage of newsprint and the increase in its price were dominating

factors which made it hard to plan for the future. At the beginning of the year newspapers were considered to have reached, if not passed, the peak of daily sales. As the year advanced, the newsprint position steadily worsened, until by the end of it the dailies were back on a wartime tonnage ration and Great Britain, which a United Nations report had shown to be more interested in newspaper-reading than any other nation in the world, had the smallest newspapers of any free country. Government spokesmen found it necessary to deny allegations that the government were using the rationing of newsprint as a means of controlling the press.

The year began with the newspapers on a six-page basis. A temporary increase of one extra page an issue during the general election period in February was maintained until early July when the newspapers returned to six pages. In October the directors of the Newsprint Supply company decided that a further saving in consumption was unavoidable and this was effected by a return to tonnage rationing for a minimum period of six months. From Oct. 22 every newspaper was allotted a ration which it could use as desired to maintain size or circulation. Local weekly newspapers were largely exempt from this reduction.

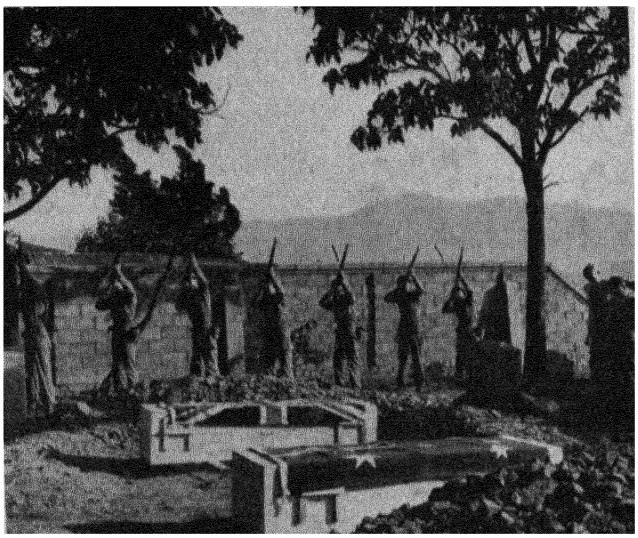
There seemed to have been two main causes for the decline in newsprint stocks in Great Britain, (1) the government's cancellation early in the year of deliveries from Canada under long-term contracts with the Newsprint Supply company; and (2) the large proportion of exports from British mills. In January the government had decided that no dollars could be made available for the purchase of Canadian newsprint in the first six months of 1950. Whereas other imports had been scaled down, newsprint was cut out altogether. On May 9 the government announced their decision to provide dollars for 25,000 tons in the second half of 1950, but by that time it was too late to secure more than 10,000 tons. Later, dollars were allocated and contracts placed for 100,000 tons from Canada up to the end of 1951. The shortage was accentuated by the government's insistence that a large proportion of home-produced newsprint should be exported. Exports in 1950 amounted to 100,000 tons as compared with about 60,000 tons in 1949; the bulk went to Australia where newspapers were returning to something like prewar sizes. The only alternative market for newsprint was Scandinavia but because of heavy buying by American newspapers British imports from that source could not be increased. The prewar consumption of newsprint in the United Kingdom, when the national dailies averaged 21 pages, was about 1,250,000 tons a year; in 1950 it was 700,000 tons.

The equalized price of newsprint which at the start of the year was £33 5*s*. a ton had reached £41 a ton by October, chiefly owing to the increased cost of Scandinavian pulp. The high price of newsprint became a major factor in production costs. Several newspapers advanced their advertisement rates and it was feared that a movement to increase selling prices of newspapers might follow any further rise in newsprint prices.

The press gallery in the new House of Commons had accommodation for 161 as against 93 in the old chamber and included 52 seats for the use of the dominion, colonial and foreign press. For the first time provincial evening newspapers had their own representatives in the gallery and in the lobby.

Reynold's News, the co-operative Sunday newspaper, attained its centenary and the *Daily Express* its 50th anniversary. The *Daily Express* was founded by Arthur Pearson and was taken over by Lord Beaverbrook 30 years ago. Its circulation then was 300,000; in 1950 it was over 4 million.

Changes in newspaper staffs during the year included the appointments of Colin R. Coote as editor of the *Daily Telegraph*, in succession to Arthur E. Watson, and of H. V. Hodson as editor of the *Sunday Times* in place of W. W. Hadley. Frank Owen relinquished the editorship of the



United Nations troops firing a salute before the burial of two British correspondents killed in Korea—Ian Morrison of "The Times" and Christopher Buckley of the "Daily Telegraph."

Daily Mail to Guy Schofield. The London *Evening Standard* received its eighth editor in 15 years, Herbert Gunn giving place to Percy Elland. L. J. Cadbury succeeded Lord Layton as chairman of the *News Chronicle* and *Star*. David Low, the cartoonist, joined the *Daily Herald* from the *Evening Standard*. Captain Bruce Ingram completed 50 years as editor of the *Illustrated London News* and received a knighthood in the King's birthday honours. After a dispute concerning the handling of material about the Korean war, Tom Hopkinson was asked to relinquish the editorship of *Picture Post* to Ted Castle.

The Korean war caused several casualties among British journalists, and the deaths of Ian Morrison of *The Times* and Christopher Buckley of the *Daily Telegraph* meant the untimely loss of two outstanding reporters. Other newspapermen who died during the year included Sir Willmott Lewis, Washington correspondent of *The Times;* H. A. Gwynne, editor of the *Morning Post* from 1911 until it was merged into the *Daily Telegraph* in 1937, and Arthur Kiddy, city editor of the same newspaper from 1914 to 1937; Hargreaves Parkinson, until not long before editor of the *Financial Times;* three former active members of the staff of *The Times*, Hartley Withers, city editor, W. H. Salmon, editor of *The Times Weekly Edition*, and Lieut. Colonel J. A. Jenkins, night editor; J. Stuart Hodgson, former editor of the *Daily News;* and Ralph Hill, the music critic. Nor can any obituary list of journalists omit the name of George Bernard Shaw, who died in his 95th year. (*See* OBITUARIES.)

The control of paper for periodicals and magazines which had been substantially relaxed during 1949 was entirely lifted from the beginning of March 1950. The restrictions on new publications were withdrawn at the same time. This freeing from restrictions proved to be not quite all that was hoped for. In effect, the periodicals were free to use as much paper as they could obtain from the limited supplies available but these supplies fell a good deal short of needs. With the aid of intensive advertising campaigns the circulations of many popular periodicals soared, particularly those devoted to women's interests. But increased production costs made it hard for some periodicals which could not command mass circulations and in many cases advertisement rates were increased.

The normal publication of periodicals and London suburban newspapers was twice seriously interrupted by a labout dispute between the London Master Printers' association and the London Society of Compositors concerning wages



BRITISH NEWS PICTURES OF THE YEAR

The pictures on these facing pages received awards in the third annual "British News Pictures of the Year" competition sponsored by the "Britannica Book of the Year." The photographs of Dr. Charles Hill and a wounded Korean have been selected from the winning portfolio and sequence entries. The competition was judged by Percy W. Harris, Hon. F.R.P.S., W. S. Bowser, news editor, northern edition, "Daily Express," W. K. McGowran, sports editor, "Evening News," Robert Rider-Rider, British news photographer of 1949, and John Armitage, London editor of "Encyclopædia Britannica."

SEQUENCE. United States soldier tending the wounded in Korea: one of the 21 photographs in the winning sequence of the Inchon invasion by Bert Hardy of "Picture Post" (London).

NEWS. Crowds greeting Frank Sinatra at the Palladium theatre: by R. E. Mitchell, a free lance photographer for Associated Press (London).



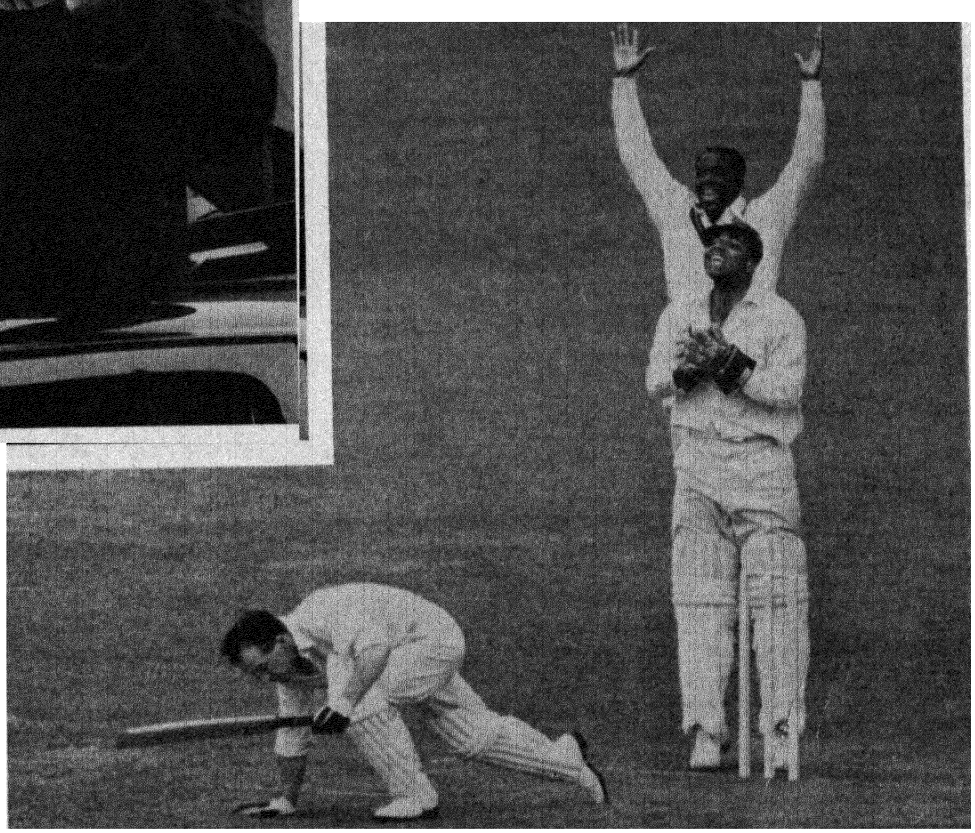
More than 1,800 pictures were entered by 198 British press photographers. Entries were accepted from 32 centres in the British Isles. In addition to the five categories illustrated on these pages there was a sixth for colour entries. First prize in this section was awarded to Jack Esten of "Illustrated" for his picture of Pat Smythe jumping in a riding school. The winners received their prizes from Field Marshal Viscount Montgomery of Alamein.



FEATURE. Brumas, the young polar bear being nursed by Ivy, its mother: by C. Dawson of Planet News (London).



PORTFOLIO. The Radio Doctor, Dr. Charles Hill, during his election campaign at Luton: one of the ten photographs in the winning portfolio by Stanley Devon of the "Daily Graphic" (London). The winner in this category was accorded the title "British News Photographer of 1950."



SPORT. "Jubilation," showing C. Walcott catching W. J. Edrich during the second test match between England and the West Indies at Lord's: by C. E. Seymour of Sport and General Press Agency (London).

and certain restrictive practices introduced by the union. Some 100 periodicals including the *Radio Times* with a normal circulation of 8 million were unable to publish, and several others appeared in an abbreviated or typescript form. Suburban newspapers, too, had their improvisations, one, at least, covering the local news entirely by pictures. The second stoppage of nearly five weeks was more serious than the first and before it ended involved nearly 6,000 compositors as well as other workers in the industry.

Two new publications for children, *Eagle*, a strip cartoon paper, and *School Friend*, for schoolgirls, both quickly attained huge sales. *The Times Law Reports*, in a more convenient size, changed to weekly publication; *Public Opinion*, established in 1861, was acquired by the *Daily Mirror;* the Amalgamated Press acquired *Everybody's Weekly*, which claimed a circulation of 1 million; the *Leader* magazine was incorporated in *Picture Post* and *News Review* in *Illustrated.* Casualties among periodicals included the *Strand Magazine*, a pioneer in monthly magazines, which suspended publication because of rising costs and the growing problems of production; *Life and Letters*, which continued the *London Mercury* and *Bookman;* and *Penguin New Writing*.

The *Jewish Times*, London's Yiddish daily newspaper, founded by Morris Myer in 1906, ceased its publication on Nov. 17. The only foreign language daily newspaper in London was the *Dziennik Polski*, which first appeared in July 1940.

Commonwealth. Freedom of the press was the principal theme of the 7th Imperial Press conference which met in Canada during June with Colonel J. J. Astor as president. The conference recommended the appointment of a standing telecommunications committee to collect up-to-date information on technical and scientific research which might lead to quicker and cheaper transmission of news; it was also proposed that the committee should press for publication and distribution of newspapers by electronic or other means and urge the authorities to provide frequencies for such services. Other subjects dealt with by the conference included the empire penny press rate; freight and mail rates between Commonwealth countries; the speeding-up of air communications; and newsprint control.

Inquiries into riots in some of the African colonies had drawn attention to the mischievous part played by irresponsible newspapers in the disturbances and, although it was realized that these newspapers were only a minority of the 450 or so newspapers making up the colonial press, practical suggestions were made for improving the standard of colonial newspapers in general. One such suggestion was the teaching of journalism in colonial university colleges. Twelve British newspapers agreed to take journalist trainees from the Commonwealth for two or three months each year under a scheme sponsored by the Empire Press union. The colonial press laws also came up for discussion at the Imperial Press conference and it was recommended that the Empire Press union should offer its services to the Colonial Office whenever a question arose of alleged irresponsible publications.

In South Africa the Union government appointed a commission of inquiry into the press of South Africa under the chairmanship of Mr. Justice J. W. van Zyl with three English-speaking members and three Afrikaans-speaking.

Indian and Pakistan newspaper editors agreed to use their influence to ensure that the press in either country did not indulge in propaganda against the other; the conference also set up a committee to meet at intervals in an endeavour to bring about better relations between the two countries. In Cyprus the editor and printer of the weekly paper *Ephimeris* were sentenced to imprisonment and the newspaper was suspended for two years for publishing an article with intent to bring the government of the colony into hatred and contempt. African-owned newspapers in the Gold Coast campaigned against the publication of the *Daily Graphic*, a subsidiary of the London *Daily Mirror* and allegations of undercutting in advertisement rates were made. A new press law gave the government of Singapore power to suspend publication of newspapers publishing matter " calculated to foment opposition to the prosecution to a successful issue of any warlike operation " on which British forces were engaged or committed by reason of a resolution of the U.N.

Europe. The "cold war " between east and west profoundly influenced the course of journalism in Europe throughout the year, bringing with it frustration and embitterment. In Western Germany the British transferred control of *Die Welt* to German hands. *Die Welt* first appeared in 1946 and at one time had a circulation of nearly 1 million. At the time of transfer its circulation was 350,000. From the beginning of July non-official newspaper correspondents and others were transferred to the German economy and were thus no longer charged to the occupation costs. This meant that British journalists had to pay for everything in marks and became liable to all German taxes and the German law of libel.

During August several of the Communist newspapers, including all seven in the British zone, were banned by the Allied High commission and their printing works closed for three months. Only two or three Communist newspapers continued in the American and French zones. In west Berlin the distribution of Soviet sector newspapers was prohibited. John Peet, Reuters' chief correspondent in Berlin, announced in June that he was " no longer disposed to serve the warmongers " and asked for permission to live in East Germany. In Moscow, R. Dalglish, assistant editor of the Foreign Office newspaper in Moscow, *British Ally*, resigned because of the alleged anti-Soviet attitude at the embassy. *British Ally*, which had been subjected by the Soviet authorities to deliberate restrictions on its circulation, was forced to close down later in the year.

Cyril Ray became staff correspondent in Moscow for the *Sunday Times*—the only non-Communist newspaper in the Commonwealth with a resident representative in the U.S.S.R. Further expulsions from Prague of western journalists made Czechoslovakia more than ever a closed book so far as independent journalism was concerned, the only two British correspondents remaining being the representatives of Reuters and the *Daily Worker*. In France, Communist party demonstrations against the newspaper *Figaro* at one time took the form of destroying in the street copies of the newspaper snatched from newsvendors. *L'Epoque*, a Conservative daily newspaper founded in 1932 by Henri de Kerillis, suspended from June 1940 to May 1945, ceased publication on Nov. 18.

Polish journalists were expected to attend special courses in Russian. Reuters' representative, the sole remaining British correspondent in Poland, was expelled because of " unobjective " reporting.

After the abolition of the military commission in Austria, the British decided for reasons of economy to end their control of the Vienna evening newspaper *Weltpresse*. The newspaper was sold to the Austrian Socialist Publishing company which had been responsible for its printing and distribution under British control. *Die Weltpresse* had a circulation of 100,000 and in the five years of its existence made a net profit of Sch. 11 million. The American-sponsored *Wiener Kurier* continued to appear as the only newspaper not subject to Soviet pressure. From Italy came the news that Giovanni Ansaldo, formerly editor of Ciano's newspaper *Il Telegrafo*, had been appointed editor of the Neapolitan daily *Il Mattino*, followed by the appearance in Rome of a new daily newspaper with neo-Fascist sympathies. It took the same name, *Popolo di Roma*, as one of Mussolini's newspapers. (D. HN.)

United States. Acclaimed "the best reported war in history," the United Nations action in Korea recruited at least 320 reporters and photographers at the front, while 60 others covered the Pentagon in Washington, D.C. As newsmen worked close to action, at least 32 were killed, wounded, missing, captured or lost in plane accidents.

Newspaper income reached an all-time record in 1950 but, for the fourth year, labour and paper costs rose faster, reducing profits. Circulation, after a record of 52,845,551 copies daily in 1949, continued to rise, with afternoon papers leading. More than 1,500 dailies reached a five-cent copy price. After attaining an all-time record in 1949, advertising linage continued to gain, with every month above 1949 and August leading with a 9·4% increase. Exceeding the 1949 total of $445,015,000 in national advertising, newspapers led all other media. Because of higher costs, advertising rates were increased generally. Paper supply caused much concern as production threatened to fall behind increased consumption. Paper needs for the year exceeded 5,900,000 tons—an increase of 6·5% over 1949 and a record. The price of paper, which had averaged $101 a ton base rate since World War II, rose in the fall; a threatened rise of $10 was later reduced to $6. Except for 950,000 tons from U.S. mills and 175,000 tons from Europe, all U.S. newsprint came from Canada. Sale of the 116-year-old *New York Sun* to the Scripps-Howard *World-Telegram* on Jan. 3 led a series of at least 16 mergers and suspensions attributed to rising costs.

The most notable newspaper strike was the 11-week suspension of the *New York World-Telegram and Sun* from June 12 to Aug. 28 because of American Newspaper guild picket lines. A strike of mailing employees shut all Pittsburgh dailies for 47 days from Oct. 2 to Nov. 17. About 250 United Press teletypers struck in May. Although the International Typographical union was accused of 106 strikes against 158 newspapers since 1945, the number during 1950 was smaller. Most new union contracts raised wage scales, including $5 a week increase in New York city and $4 in Philadelphia.

The leading newspaper lawsuit of 1950 was the prosecution of the *Lorain* (Ohio) *Journal* by the federal department of justice for violation of the Sherman Anti-trust act in refusing advertisements of merchants who used a competing radio station. The trial resulted in October in an injunction forbidding rejection of advertising—the first verdict of its kind. An anti-trust suit was also brought against two New Orleans dailies for a combination advertising rate. A local newspaper licensing tax was successfully contested by the *Turlock* (California) *Journal*. Detroit tried a "nuisance rule" to bar the Communist *Daily Worker* from news-stands. The U.S. Supreme Court overruled the Baltimore "gag rule" on criminal news. The Langer bill to ban liquor advertising died in the Senate committee. A proposed international code of ethics for the press of the world was again debated in a United Nations sub-committee without agreement.

Convening in Madison, Wisconsin, the three national groups of journalism teachers merged into one Association for Education in Journalism. A "content study" of the Associated Press report, made by the A.P. Managing Editors association, criticized "wordiness" but denied a charge of "bias." Research in mechanics, conducted by an A.N.P.A.-endowed laboratory, developed refinements in offset printing, stereotyping and photo-engraving. The Pulitzer prizes in journalism were opened to weekly newspapers for the first time. The 11th annual Newspaper week in October enlisted newspapers in fighting Soviet propaganda. The American Newspaper guild considered a plan of launching daily newspapers. More than 200 editors from many countries gathered in New York city on Oct. 9 for an inter-American press conference, the first since 1926.

Magazines, reaching a record total of 7,000 titles, faced business problems like those of newspapers. Advertising increased as much as 14% to a record peak of $475 million and rates were generally raised. Paper grew scarcer and prices rose 5% to 25%. The cost per page was above any year except 1949, with paper taking 25%. Gross income was the highest on record, but profits were narrower. Tabulations showed 1,747 national advertisers spending more than $25,000 each in magazines early in 1950, as compared with 666 in 1939; during the same years magazine circulation rose 30%. At least 1,000 new magazines appeared late in the year, many of them picture books for wartime news stand sale. Men's magazines—*Argosy*, *True*, *Esquire*—were decidedly up; women's magazines were slightly up; romance and movie magazines were down. More pocket-size magazines appeared, and teen-age books boomed. Negro magazines—*Ebony*, *Negro Digest*, *Tan Confessions* — greatly increased. Comics came back strongly after attack and promoted a "better schools" campaign. Sunday magazines of 122 newspapers passed a weekly circulation of 55 million. *Harper's* celebrated its centennial in October. *Fortune* started a pocket-size digest. *Quick* passed the million mark and led news-stand sales, but *Flair*, also a Cowles Magazines, Inc., venture, was suspended after 11 issues. (G. M. Hy.)

NEW YORK CITY. Largest city in the United States and second largest in the world. The population of the city of New York, according to the 1950 census (preliminary figures), was 7,835,099. On Nov. 7, 1950, Vincent R. Impellitteri was elected the city's 101st mayor, to complete the remaining three years of the unexpired term of William O'Dwyer, who resigned on Sept. 1, 1950.

In the last six months of 1950 the city initiated preparations to meet the dangers of atomic war. Arthur W. Wallander, a former police commissioner, was appointed director of civil defence. It was expected that the civil defence organization, when it reached full strength, would command more than 400,000 trained municipal employees and volunteers. Completion of two new hospitals in 1950 and the return of another from the federal government provided 900 additional hospital beds. The two new hospitals were the first built under the city's $192 million hospital construction programme. They were the Francis Delafield Hospital for Cancer, which was affiliated with the Columbia-Presbyterian Medical centre, and the James Ewing hospital, also devoted to cancer patients and affiliated with the Memorial Cancer centre and the Sloan-Kettering Research institute.

The public housing construction programme maintained a high level of achievement. During the first ten months of the year, 11,343 apartments were completed. In the first six months of 1950, 11 school projects were completed, and before the end of the year the number was expected to reach 16. The Brooklyn Battery tunnel was opened in May. It was the longest tunnel in the U.S., built at a cost of $80 million.

The department of commerce of the city of New York, in a report issued Jan. 1, 1951, disclosed that the city had 235,000 business establishments, including 41,400 manufacturers. These concerns employed more than 3 million persons. The city's consumer market was the largest in the world with an annual retail sales volume of about $10,500 million.

NEW ZEALAND. Self-governing member of the Commonwealth of Nations, consisting of two large and several small islands in the south Pacific. Area: dominion proper, 103,416 sq.mi.; other islands, 523 sq.mi. Pop. dominion proper: (1945 census) 1,747,679, including armed forces overseas and 98,744 Maoris; (Jan. 1950 est.) 1,902,460, including *c.* 115,000 Maoris (which represents a two-and-a-half increase in the last 50 years). Cook and other Pacific islands (pop., 1945 census): 19,761. Western Samoa, a

trusteeship, has an area of 1,133 sq.mi. and pop. (March 1948 est.) of 72,936. Language: English. Religion: mainly Christian (Anglican 37·5%, Presbyterian 23·4%, Roman Catholic 13·5%). Chief cities (April 1949 est.): Wellington (cap., 186,000); Auckland (289,000); Christchurch (164,000); Dunedin (88,800); Palmerston North (30,100). Governor general, Lieut. General Sir Bernard Cyril Freyberg; prime minister, Sidney George Holland (*q.v.*).

History. Although the first session of the new parliament did not begin until June, the new administration began the year 1950 with a thorough enquiry into the finances of the country. While all the economic controls which had been instituted by the previous government as a result of its policy or because of wartime measures, could not immediately be abolished, many controls were swept aside; in particular, land sales control on house property and many price controls. The measure which caused the greatest discussion was the removal or reduction for this year of some £7 million of government subsidies. This affected such items as butter, tea, bread, flour, eggs, milk, wool and the railways. To offset the rise in prices cost of living bonuses were immediately granted.

Arrangements were furthered to establish compulsory military training for 18-year-olds after the national referendum of the previous year. New Zealand joined Great Britain as the only country in the Commonwealth to have a compulsory military training scheme.

In international affairs, F. W. Doidge (*q.v.*), minister for external affairs, attended the Colombo conference in January, and later the Sydney conference in Australia. He also attended the conference of ministers in London in September when the final touches were put to the Colombo plan for Commonwealth aid to southeast Asia. New Zealand offered full co-operation, in particular technical aid. The U.N. Trusteeship council accepted the New Zealand report on Western Samoa. The government called again for an early decision on the peace treaty with Japan and stressed the need for definite assurances that a military regime would not be allowed to dominate the Pacific. When the United Nations were challenged by Communist forces in Korea immediate aid was offered. Naval units and an artillery force made up entirely of volunteers were made available.

A visit by R. G. Menzies, the prime minister of Australia, saw an interchange of views between the two countries on Pacific defence and the expansion of trade. P. C. Gordon Walker, Britain's secretary of state for Commonwealth relations, was also a welcome visitor during the year.

In the economic field the swiftly rising level of prices for raw wool created an element of boom prosperity. Wool reached all-time record prices. This factor, with the removal of subsidies, was reflected in rising prices. Adjustments to social security benefits, wages and salaries followed. With the market for raw materials generally buoyant throughout the world and with the improvement of the sterling area's dollar pool, New Zealand also found its dollar position considerably eased.

To offset boom conditions and the inflationary effect of wool prices, one-third of the proceeds from the sale of wool was frozen in growers' bank accounts. This action, to be reviewed after a year, froze some £50 million of an expected £150 million wool cheque. This record sum was £90 million more than in 1949.

The abolishing of import licences for many articles implemented the new free enterprise policy of the government and tenders were also called for the purchase by private enterprise of the national airways. The sale of state houses, the restoration of capital punishment, the raising of a new internal loan of £20 million, the provision of secret ballots for unions on the issue of compulsory unionism and suspensory loans for home builders were features of the government's policy. Others were the removal of the power of direction of the reserve bank from the minister of finance to parliament and the handing back of workers' compensation to private insurance companies. A notable constitutional feature was the abolition of the Legislative Council, New Zealand thus becoming the first unicameral legislature in the Commonwealth.

Deadlock in the price negotiations discussions with Great Britain for dairy produce and meat caused great disappointment. K. J. Holyoake, the deputy prime minister, led the New Zealand delegation to the conferences in London and Australia on questions of establishing a floor price scheme for wool and other matters of disposal. A U.S. scheme for allocation of wool supplies was judged by the wool-growing countries in the Commonwealth to be unacceptable.

An expansion of policy of emigration resulted in married family units of certain categories of workers being accepted under the free passage and guaranteed work scheme, and arrangements with the Netherlands government were made whereby certain categories of single Dutch workers would also be accepted.

A split was seen in organized trade unionism. The more militant unions, led by the waterside workers, broke away from the Federation of Labour to form the Transport Workers' federation. Disruption of waterfront labour by disputes continued to harass overseas shipping, notably in Auckland, and a royal commission to enquire into the waterfront industry was set up.

Outstanding social events of the year were an international conference on social security held in February and a meeting of the Commonwealth Parliamentary association, both in Wellington. M. H. Oram, the speaker of the House of Representatives, visited Great Britain to attend the opening of the new House of Commons. The year also saw the 600th anniversary of the main Maori migration to New Zealand and important celebrations were held. On Dec. 15 the centenary of the province of Canterbury was celebrated, Dr. Geoffrey Fisher, the archbishop of Canterbury, being the chief official guest. The province was the finest example of planned colonization under the Church of England of the colonial reform period of last century.

The fourth Empire Games (*q.v.*) were held in Auckland and were highly successful: 28 records were broken and 2 world records equalled; Australia was most successful, winning 34 events, Britain 19 and New Zealand 10.

The death of Peter Fraser, former prime minister of the Labour administration, removed one of New Zealand's best known statesmen from the political scene and the loss was generally mourned (*see* OBITUARIES). (A. T. CL.)

Education. Schools (Dec. 1948): primary 1,932, pupils 233,008, teachers 7,251; Maori village schools 160, pupils 13,254, teachers 399; secondary 47, pupils 21,373, teachers 1,036; district high schools 100, pupils 6,665, teachers 376; Maori district high schools 7, pupils 200, teachers 13; technical 28, pupils 12,136, teachers 755; private secondary 83, pupils 9,495, teachers 505; teachers' training colleges 5, students 1,847; agricultural colleges 2, students 1,461; University of New Zealand (four colleges), students 11,380.

Agriculture. Main crops ('000 metric tons, 1948-49; 1949-50 in brackets): wheat 163 (128); barley 51 (54); oats 67 (59); potatoes 111 (120); dry peas 33. Livestock ('000 head): cattle (Jan. 1949) 4,723; sheep (April 1949) 32,845; pigs (Jan. 1949) 545; horses (Jan. 1949) 209. Meat production ('000 metric tons, 1948-49; 1949-50 in brackets): total 531 (524), of which mutton and lamb 307 (315). Dairy production ('000 metric tons): factory butter (1949) 168·0; factory cheese 100·8; milk (1949-50) 4,535. Wool production ('000 metric tons, greasy basis, 1949-50) 167. Fisheries: total catch (1946): 32,047 metric tons.

Industry. Industrial establishments (1948): 35,579; persons employed 438,480. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 948 (499); lignite 1,908 (835); manufactured gas (million cu. metres) 157 (76); electricity (million kwh.) 2,565 (1,212). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): superphosphates 624 (308); cement 253 (124).

Foreign Trade. (£NZ million, 1948; 1949 in brackets) Import 128·2 (119·8); export 147·2 (146·8). Main sources of imports (nine months

of 1949): U.K. 52%; U.S. 11%; Australia 11%. Main destinations of exports: U.K. 72%; France 6%; U.S. 3%.

Transport and Communications. Railways (1949): 3,528 mi.; passenger journeys 26 million; freight net ton-mi. 1,028 million; freight tons carried 10 million. Roads, main (1949) 12,708 mi., of which arterial roads 5,234 mi. Licensed motor vehicles (Dec. 1949): cars 230,664; commercial 75,938. Shipping (July 1949): number of merchant vessels over 100 gross tons 164, total tonnage 190,910. Air transport (1949): passenger mi. 78 million; cargo net ton-mi. 1,650,000. Telephones (March 1949): subscribers 238,292. Wireless licences (Sept. 1949): 442,506.

Finance and Banking. (£NZ million) budget (consolidated fund and social security fund, excluding war expenses account): (1949-50 actual) revenue 168·8, expenditure 167·1; (1950-51 est.) revenue 181·8, expenditure 180·2. Gross national debt (March 1949; March 1950 in brackets): 615 (670). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 45·9 (48·4). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 147·7 (153·4). Monetary unit: New Zealand *pound* with an exchange rate of £NZ 1·00375 to the pound sterling and £NZ 0·362 to the U.S. dollar.

NEW ZEALAND LITERATURE. A number of important publications appeared in the 1949 Christmas lists. In the Caxton Poets series (numbers 4-6) were J. R. Hervey's *Man on a Raft*, Allen Curnow's *At Dead Low Water and Sonnets* and Basil Dowling's *Canterbury and Other Poems*, inexpensive and excellently produced collections of poems, some of which appeared earlier in periodicals. Biblical themes were carefully employed by Ruth Gilbert in *Lazarus and Other Poems;* and A. E. Currie edited *A Centennial Treasury of Otago Verse.*

Allen Curnow's tragedy *The Axe*—the first major venture by a New Zealand poet in the theatre—was printed (first performed in Christchurch early in 1948). Set in Mangaia in the Cook Islands, it presented the conflict between modern western and primitive Polynesian societies through the theme of the conversion of the island people from paganism to Christianity. Sir Peter Buck's *The Coming of the Maori* was welcomed as the most authoritative study yet to appear of Maori history and culture through the ages.

There was a notable collection of short stories called *It Was So Late* by J. Reece Cole, and a spirited personal account of World War II operations in Major General Sir Howard Kippenberger's *Infantry Brigadier.*

In 1950 the only novel of note was Guthrie Wilson's *Brave Company*, published in New York and favourably reviewed there. Its major " character " was an infantry group in the 1943-45 Italian campaign. The highlight in poetry was Alistair Campbell's *Mine Eyes Dazzle*, a first volume of clear merit and rich simplicity. More crowded and difficult were Hubert Witheford's poems in *Shadow of the Flame.* James Baxter, appearing only in periodicals, moved more surely towards an unambiguously Christian ethic.

Polynesian research was advanced in Roger Duff's *The Moa-hunter Period of Maori Culture.* Based on archaeological findings in Wairau and elsewhere, it revealed the probable existence of a Maori culture-group distinct (though not separate in race) from the main wave of Polynesian immigrants in 1350. An unusual item was F. W. Reed's translation of Alexandre Dumas's *Captain Marion*, the account of the massacre of the French navigator and his crew by the Maoris in 1772. Rewi Alley, known already by *Gung Ho* (1948), gave some glimpse, in *Leaves from a Sandan Notebook* (prose and verse), of China's historic past and her troubled present. Harold Miller's *New Zealand* was a brief historical sketch.

Here and Now and *Arachne* (originally *Hilltop*), the two newest periodicals, after brief careers ceased publication. *Landfall* (a quarterly, edited by Charles Brasch) completed its fourth year and maintained a consistently high standard.

Jane Mander, author of *The Story of a New Zealand River* (1920) and five other novels, died in Auckland in Dec. 1949. Sir Apirana Ngata, prominent in Maori letters, died in July 1950. (R. W. B.)

NICARAGUA. Republic in Central America, situated between Honduras (N.) and Costa Rica (S.) with a coastline of over 300 mi. on the Atlantic and over 200 mi. on the Pacific. Area: 57,143 sq.mi. Pop.: (1940 census) 983,160; (1950 census, prelim.) 1,503,189. The population of the eastern half is mainly Indian or Negro, and of the western part is of mixed Spanish and Indian extraction, with some of pure Spanish descent. Language: Spanish. Religion: predominantly Roman Catholic. Chief towns (pop., 1948 est.): Managua (cap., 146,819); Léon (53,277); Matagalpa (53,118); Jinotega (41,065). Presidents of the republic in 1950: Victor Manuel Román y Reyes (*see* OBITUARIES) and, from May 7, General Anastasio Somoza.

History. Political developments during the year centred on the presidential election and attempts at a reconciliation of party differences. A mutual agreement between the National Liberal (government) party and the Traditionalist Conservative party was reached at Managua on March 29, when General Somoza, minister of war, and General Emiliano Chamorro Benard, chief of the Conservative party, agreed that there would be no foreign supervision of the national elections, the Conservatives would participate in the elections and the defeated party would be guaranteed one-third of the seats in the new Constituent Assembly. The Independent Liberal party and the Civilista Conservatives remained aloof from the compromise. On April 19, the congress granted general amnesty to all political offenders.

A new crisis developed when President Román y Reyes, who had left the country in March for treatment in a U.S. hospital, died on May 6. Somoza, who had been previously named as the presidential candidate of the National Liberal party, was designated by the congress on May 7 as acting-president. Opposing Somoza in the presidential campaign was Chamorro, representing the Traditionalist Conservatives. The elections passed off peacefully on May 21: Somoza was elected by 153,297 votes to 49,401.

The Constituent Assembly was installed on June 4 with a National Liberal majority, and on Oct. 18 approved a new constitution. The main changes effected were provisions for woman-suffrage, minority representation in congress, social security legislation and liberty of commerce.

In July the minister of foreign affairs informed the United Nations that Nicaragua would support the U.N. forces engaged in Korea. The aid offered included 5,000 volunteer troops, foodstuffs and raw materials.

Education. Schools (1948-49): primary 1,302, teachers 2,918, pupils 89,991; secondary 78, teachers 556, pupils 10,891; universities 2, students 620.

Trade and Resources. Exports during 1949 were valued at about U.S. $23·7 million ($26,682,000 in 1948); imports $21·3 million ($24,134,000 in 1948). The U.S. supplied 85·5% of the imports and took 43·8% of the exports in 1948. The leading export commodity was coffee (346,136 bags of 132 lb. from the 1949-50 crop, valued at about $14 million).

Communications. In 1949 railways measured 236·2 mi., surfaced highways 417·5 mi. and all-weather dirt roads 79·4 mi. On Jan. 1, 1949, there were 1,443 cars, 672 lorries and 151 buses registered in the country. On. Dec. 31, 1949, there were four ships totalling 8,000 tons in the national merchant marine. There were 2,000 telephones and about 8,000 receiving sets.

Finance. The 1949-50 budget provided for expenditures of C. 54·3 million, a 14% reduction from the previous year. Money supply (Sept. 1950): currency circulation C. 50·3 million; deposit money C. 48·8 million. Monetary unit: *córdoba*, officially maintained at 20 U.S. cents. (M. L. M.)

NIGER: *see* FRENCH WEST AFRICA.

NIGERIA. British colony and protectorate on the west coast of Africa, bounded W., N. and E. by the French territories of Dahomey and Sudan and Cameroun respectively. The Cameroons under United Kingdom trusteeship, the

eastern part of the former German colony of Kamerun or Cameroons, is administered with Nigeria.

	Area (sq. mi.)	Population (1947 est.)	(1949 est.)
Nigeria	338,593	20,000,000	24,000,000
Cameroons	34,081	865,000	1,027,000

Pop.: mainly African with Arab admixture. Language: tribal dialects and Hausa. Religion: mainly Moslem in the north; mainly pagan in the south; Christianity widespread among the educated classes. Chief towns (African pop., 1949 est.): Lagos (cap., 250,000); Ibadan (335,500); Kano (102,000). Administration: governor; executive council, 8 *ex officio* and 6 appointed members; Legislative Council, 13 *ex officio*, 3 nominated official, 24 nominated unofficial and 4 elected members. Governor, Sir John Macpherson.

History. Consultation of the people on the proposed revision of the Nigerian constitution continued throughout 1950. In January a general conference including all the unofficial members of the legislature and 25 representatives of the regions met in Ibadan to consider proposals resulting from earlier regional and provincial conferences. These had provided for the maintenance of the three regions (northern, eastern and western, the last enlarged to include Lagos and the colony proper), each with a regional legislature. In the northern and western regions the legislatures would be composed of a House of Chiefs as well as a House of Assembly, but in the eastern region of a House of Assembly alone. The regional legislatures would be empowered to legislate on such matters as local government, agriculture, education and public health, while a Central Legislature composed of members selected from their own numbers by the members of the regional legislatures would have general power to legislate for Nigeria, including power to delegate any subject to the regional legislatures and to refer back or to reject regional legislation if repugnant to any important general Nigerian interest. This Central Legislature would be composed of 30 members from the northern and 22 each from the eastern and western regions. Each region would have a regional executive including a maximum of five official members and nine members elected by the unofficial members of the House of Assembly and, in the northern region, the House of Chiefs. The central executive would be a council of state including, besides 6 official members, 12 elected from among their own number by the unofficial members of the Central Legislature; of these, 9 would be responsible for a subject or group of subjects and 3 ministers without portfolio. These proposals were accepted in the main by the general conference which recommended, however, that Lagos should be a municipality independent of the three regions and that the Central Legislature should be enlarged to include 33 members from the eastern and western regions and 45 from the northern region. The northerners, however, maintained their claim that on a population basis, the northern region should be given the same number of representatives in the Central Legislature as the other regions taken together.

The Legislative Council decided that the status of Lagos as the capital should be recognized by special arrangements and that power to refer back legislation to regional legislatures should be invested in the central executive rather than in the Central Legislature; and in September accepted the northern demands and agreed to the inclusion in a single chamber central legislature of 68 members from the northern region and 34 members each from the eastern and western regions; there would also be 6 *ex officio* members and 6 members appointed by the governor for interests not otherwise represented.

The report of the commission appointed to inquire into the disturbance in the Eastern Provinces in Nov. 1949 was published in June. It found that the action of the police officer who had given the order to fire during the disturbances was an error of judgment which " fell short of that standard that might be expected from one of his rank," but commended the action of the administration in dealing with the succeeding disturbances in other parts of the Eastern Provinces. It also emphasized the " paramount necessity of isolating industrial disputes from political agitation," but its conclusion that the chief commissioner of the Eastern Provinces had treated the miners' dispute as political agitation rather than an industrial dispute was not accepted by the Nigerian government.

In February, the government bought for £1 million the rights of the United Africa company in mineral royalties in northern Nigeria. In September, the first elections to the Lagos municipal council to be held on a universal adult franchise resulted in 18 of the 24 seats being won by the Democratic party of Nnamdi Azikiwe.

Finance and Trade. Currency: West African pound (£WA 1=£1 sterling). Budget (1949): revenue £30,170,000; expenditure £27,230,000. Foreign trade (1949): imports £65,465,881; exports £60,512,699. Principal exports: cocoa, tin, groundnuts, palm oil and kernels.

See J. Wheare, *The Nigerian Legislative Council* (London, 1950).

(K. E. R.)

NOBEL PRIZES. These are awarded from the Nobel foundation, a fund established under the will of A. B. Nobel, a Swedish chemist and engineer, who died on Dec. 10, 1896; they were first awarded in 1901. The value of the prizes varies: in 1950 it amounted to 164,303 Swedish crowns (about £11,330).

The 1950 peace prize was awarded to Ralph J. Bunche, United Nations acting mediator in Palestine, 1948-49. The prize for medicine and physiology was shared between Philip S. Hench and Edward C. Kendall, both of the Mayo clinic, Rochester, Minnesota, U.S., and Tadeusz Reichstein of Basle, Switzerland, in recognition of their work in the discovery of Cortisone. The prize for physics went to Cecil F. Powell of Bristol university. Otto Diels, formerly of Kiel university, and Kurt Alder, of Cologne university, shared the prize for chemistry. Earl Russell (Bertrand Russell) was awarded the 1950 literature prize; and William Faulkner received the 1949 literature prize which had been withheld in its proper year.

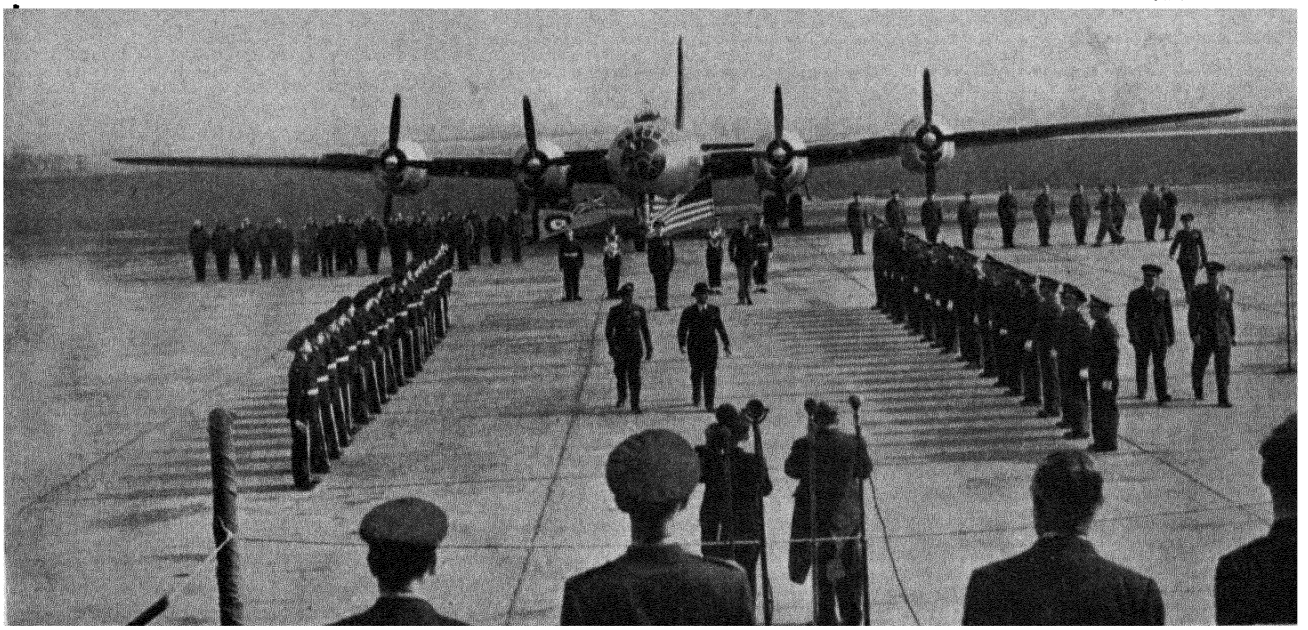
Biographies of Nobel prizewinners are included in the *Britannica Book of the Year*.

NORFOLK ISLAND: *see* COMMONWEALTH OF NATIONS.

NORTH ATLANTIC TREATY POWERS. On April 4, 1949, 12 north Atlantic and west European nations, Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States, signed the North Atlantic treaty. Under its terms, they declared that an attack against any one of them in Europe or North America would be considered an attack against them all, and undertook " separately and jointly, by means of continuous and effective self-help and mutual aid, to maintain and develop their individual and collective capacity to resist armed attack." During 1950 the North Atlantic treaty powers set about translating this undertaking into action, but progress was difficult and slow.

Three clearly marked periods could be discerned in the history of the North Atlantic treaty. It came into being under the pressure of Soviet policy in 1947-48 when evidence accumulated that the U.S.S.R. entertained designs for bringing the whole of Europe under its influence and domination. The U.S. had at that time a monopoly of atomic weapons, and it was believed that Russia would not attack western Europe if it were made clear to it that by so doing it would involve itself automatically in war with the U.S.

A new phase began with the announcement, in Sept. 1949,



The secretary of state for air, Arthur Henderson (centre, in civilian clothes), at Marham, Norfolk, in March 1950, when he accepted the first equipment sent by the United States to Britain under the North Atlantic treaty.

that an atomic explosion had taken place in Russia. It forced the North Atlantic treaty powers to consider the possibility of a Russian attack in spite of the U.S. guarantee of western Europe and to apply themselves to the creation of a military defence system which could provide physical security. Their efforts in this direction filled the first half of 1950. They were leisurely and produced few practical results. It was assumed, during this period, that a Soviet armed attack was unlikely for several years at least, and the North Atlantic powers were preoccupied with problems of economic recovery and their trade balances. Their search for means of strengthening their defensive capacity without increased economic sacrifice and effort was largely unsuccessful.

The second phase was brought to an end by the aggression committed by a Soviet-inspired government with Soviet-armed forces in Korea on June 25, 1950. Believing now that planned and deliberate armed aggression was not excluded from the methods of Soviet policy and that the danger that the far eastern war thus engendered might spread to Europe. the North Atlantic treaty powers began reluctantly to increase their armaments and to prepare a joint defence force for Europe. Their efforts were delayed by disagreements about a German contribution to European defence. By the end of the year, however, a joint command was established in Europe, and plans were laid to provide it with adequate forces. But it was clear that these plans were unlikely to result in the provision of real security to western Europe for another two years.

The first significant event of 1950 had been the signing on Jan. 27 of bilateral mutual defence assistance agreements between the United States on the one hand and the United Kingdom, France, Italy, Norway, Denmark, Belgium, the Netherlands and Luxembourg on the other. The treaties provided for mutual arms assistance, the bulk of it flowing from the U.S. to Europe, and for the application of the arms provided for North Atlantic defence. But they struck the key-note of the period by establishing, in their first article, " the principle that economic recovery is essential to international peace and security and must be given clear priority." The military committee of the North Atlantic treaty powers had met at The Hague on March 28, and the defence committee on April 1. The two committees agreed on a defence plan which was to be put into practice over the next four years. The *communiqué* issued afterwards, by emphasizing " the great importance of adequate financing . . . and the need for careful balancing of the respective national economies," betrayed some anxiety lest the plan might be wrecked by financial and economic difficulties. The financial and economic committee of the North Atlantic treaty powers,which met in London, issued an unusually reticent *communiqué*.

When the treaty council met in London from May 15 to 18, it found that the reports of the military and defence committees clashed with that of the financial and economic committee, in other words, that the financial and economic departments of the 12 governments were unwilling to meet the cost of the measures which the defence departments considered necessary to make western Europe safe from attack by 1954. The council issued new directives to the two committees, emphasizing that " the problem of adequate military forces and the necessary financial cost should be examined as one and not as separate problems." It proclaimed its conviction that the combined resources of the treaty powers " are sufficient, if properly co-ordinated and applied, to ensure the progressive and speedy development of adequate military defence without impairing the social and economic progress of these countries." It urged the member governments to seek economies by concentration on " balanced collective forces."

The proposal of " balanced collective forces " was generally understood to mean in practice that most of the western European member states were expected to cut down on their naval and air armaments in order to achieve the necessary minimum of land defence within the narrowly circumscribed framework of their defence budgets. When the deputies' council met for the first time in London on July 25, under the chairmanship of its U.S. member, Charles M. Spofford, the outbreak of war in Korea had changed the whole setting of the problem. The U.S. had doubled its defence budget and quadrupled its appropriation for military aid to its allies. The European members were also considering increases in defence expenditure. In general, the principle of " clear priority " for economic recovery over defence, officially established six months before, was giving way to the principle of equal priority for both.

The deputies could, therefore, concentrate on drawing up a production programme for "certain high priority armaments items," and on undertaking an urgent study to decide on the fair distribution of the financial burdens and the most effective use of the collective resources. They also collected reports from the individual treaty nations on their military plans. Their *communiqué* of Sept. 4 stated dryly that on examination of these reports they found that "much remains to be done." This statement was heavily reinforced two months later by General George C. Marshall (*q.v.*), who had in the meantime been appointed U.S. secretary of defence. Addressing the defence committee on Oct. 28, he stated: "What has been done so far, good as it may be, is far from enough . . . The actual collective forces of the north Atlantic states may be not enough to deter aggression in the north Atlantic area, and definitely are not enough to resist attack without serious and critical initial losses."

September and October saw repeated meetings in New York and Washington of the treaty council and the military and defence committees. These produced important decisions but also new disagreements. The fundamental decision reached was "to create in the shortest possible time an integrated military force adequate for the defence of freedom in Europe." The target date for building up this adequate defence force was put forward to 1952—1954 had been envisaged at The Hague meetings in March and April. This implied a definite switch round of the priorities for economic recovery and defence in favour of the latter in all participating countries. Furthermore, the forces now to be created were to be put under a supreme commander. The treaty council at its September meeting also invited Turkey and Greece to be associated with the planning group for Mediterranean defence. Implementation of the major decisions was to await agreements on changes and simplification of organization, on precise allocations to the joint force by the various member states, and on the methods of a German contribution to European defence.

This latter question, which had been first raised at the New York meeting in September, proved a serious stumbling block. The Federal Republic of Germany was not a signatory of the treaty but was inevitably a passive beneficiary of the defence plan adopted, which included a defence of its territory. In the American view it was both fair and expedient that Germany should make a contribution to European defence. France, however, fearful of any revival of an independent German army, made her agreement conditional on the creation of a European army "composed of men of different European nations . . . under a single European political and military authority." Deadlock was reached at the Washington meetings of the military and defence committees in October, when other treaty powers pointed out that the French plan would delay a German contribution far longer than could be afforded. Finally, after prolonged negotiations in the deputies' council and the military committee, France agreed to a compromise, under which German formations of 4,000 to 5,000 men, without heavy armament, and not exceeding in total one-fifth of the forces under the Atlantic command in Europe, might be established pending negotiations on the formation of a European army which would be discussed at a conference in Paris during Jan. 1951.

This compromise was received badly by the government of Western Germany, which refused to consider a German defence contribution except on terms of equality. But it was deemed sufficient by the treaty powers to open the way for the creation of a joint command. On Dec. 18 and 19, the North Atlantic council, meeting in Brussels, decided to establish a "Supreme Headquarters of the Atlantic Powers in Europe" (S.H.A.P.E.), appointed General Dwight D. Eisenhower (*q.v.*) of the U.S. army to be supreme commander, established a Defence Production board with wide powers instead of the former purely consultative Military Production and Supply board, and invited the occupying powers in Germany to explore the question of a German defence contribution with the German government.

Nothing that was done during the year substantially increased the land forces in western Europe. They consisted at the end of the year of two American, two British and three French divisions in Germany; one Belgian, one Danish and one Norwegian brigade in Germany; and American, British and French garrison troops in Trieste, Vienna, Berlin and other Austrian and German centres. Altogether they were the equivalent of, at most, 12 weak divisions facing 175 active Russian divisions, at least 100 of them stationed in Europe. The disproportion remained great even if account were taken of the fact that a Russian division had little more than half the effectiveness of a western division. However, these Atlantic troops were being re-organized and redeployed to be capable, in the second half of the year, of undertaking active operations, and reinforcements were slowly arriving. Most treaty states took defence measures at home during the second half of 1950, which were expected to bear some fruit in 1951. Thus the United Kingdom increased its defence budget by £200 million and the length of military service from 18 months to two years, and was forming three and a half new divisions of which one was to be allocated to the Atlantic command in Europe. France lengthened military service from 12 to 18 months, and announced her intention to raise her standing forces in Europe from 5 divisions in 1950 to 10 in 1951, 15 in 1952, and 20 in 1953. Belgium extended military service from 12 to 18 months for soldiers then serving and to two years for new entrants. Italy decided to increase her army from 180,000 to the full peace treaty limit of 250,000. The greatest rearmament measures were taken by the U.S., which by the end of the year planned to increase its armed forces, which had consisted of 1,458,000 men on June 25, 1950, to 3,500,000 men by June 30, 1951, and was considering the introduction of a 27-month period for military service as well as industrial mobilization.

(S. HR.)

NORTHERN IRELAND, the six counties of Antrim, Armagh, Down, Fermanagh, Londonderry and Tyrone, is part of the United Kingdom of Great Britain and Northern Ireland. It has its own parliament and executive (with limited powers for local purposes) and is represented in the United Kingdom parliament by 12 members. Area: 5,451 sq.mi. Pop.: (1937 census) 1,279,745; (1948 est.) 1,365,000. Religion (1937 census): Roman Catholic 33·5%, Presbyterian 30·5%, Episcopalian 27%, Methodist 4·3%, etc. Chief towns (pop. 1948 est.): Belfast (cap., 450,000); Londonderry (49,000); Bangor (19,000). Governor, the Earl Granville; prime minister, Sir Basil Brooke.

History. Politically, 1950 was dominated by the general election for the United Kingdom parliament (Feb.) and Sir Basil Brooke's official visit to the U.S. and Canada (April-June). The election disclosed no change in traditional allegiances, the Unionist party winning 10 seats and the anti-partitionists 2. The Unionist loss of a seat through the ending of the representation of Queen's university, Belfast, was compensated for by a gain from Irish Labour in West Belfast. The Rev. Godfrey MacManaway who was returned in this division was afterwards disqualified on a ruling by the judicial committee of the Privy council because he was an ordained clergyman of the Church of Ireland. In the by-election (November) Tom Teevan (Unionist) retained the seat with a reduced majority. MacManaway's right to sit as a member of the Northern Ireland parliament for Derry City was subsequently referred to the judicial committee for an



The Queen (left), with her sister, the Countess Granville, wife of the governor of Northern Ireland, in the grounds of Government House, Belfast, in July 1950.

advisory ruling. The two anti-partition M.P.s, Cahir Healy and Anthony Mulvey, failed to take their seats.

On his mission to the U.S., the first made by a Northern Ireland premier, Sir Basil Brooke renewed contacts made with the American forces stationed in Ulster during World War II. In Washington he pledged Northern Ireland's support for the North Atlantic treaty. Underlying his visit, however, was an effort to enlist backing for the partition settlement in Ireland. In this opposition was met from the Irish-American *bloc* but otherwise he was cordially received both in the U.S. and Canada. On his return a public demonstration testified to Unionist satisfaction at the success of his tour which observers attributed largely to his own popularity. Popular feeling was also expressed in the visit of Queen Elizabeth to Ulster (July). Except for a short series of bomb outrages in Belfast by a dissident group of the Irish Republican army (Feb., March) internal conditions were peaceful. With the release of three former members of that organization no political prisoner remained in custody. Harry Midgley succeeded Lieut. Colonel Samuel Hall-Thompson as minister of education (January) with the object of revising the Education act, 1947, in relation to voluntary schools. Agreement with grammar schools was reached (November), other proposals having still to be drafted.

The budget (May) showed revenue at £63 million and expenditure at £47 million, providing a contribution to the United Kingdom exchequer of £16 million. Legislation was passed to ratify agreement with the Irish republic on the drainage of Lough Erne for a hydro-electric scheme at Ballyshannon. The two governments also reached agreement on the purchase of the Foyle fisheries. Negotiations took place on the joint control of the Great Northern railway which in view of the absence of state assistance voted to close down (December). The Ulster Transport authority discontinued services on parts of the former Belfast and Co. Down railway and Northern Counties railway but sustained a heavy loss on the year's working. Proposals for a subsidy of cross-channel shipping were submitted to the United Kingdom government. Much progress was made with the development of social services; total of permanent houses built since the war passed 20,000.

Devaluation of sterling and rearmament stimulated trade which exceeded the 1948 total of £352 million in exports and imports. World demand, notably in the dollar area, raised linen production to a new postwar peak. Output of the Belfast shipyards was 11 vessels of 120,000 tons gross: nearly 20 new contracts were booked. A Belfast aircraft factory received large orders for Canberra jet-bombers under the defence programme. A new £4 million rayon factory at Carrickfergus for Courtaulds, Ltd., was the outstanding event of the new industries drive. The government announced a seven-year subsidy plan for older manufactures covering one-third of the cost of re-equipment. Unemployment was held at an average of 4% of the insured population. An unusually wet summer and a 50,000-ac. fall in land under cultivation reduced the supply of home-grown food; the passing of the peak in dairy cattle population was noted. (J. E. Ss.)

Education. Schools (1949-50): primary 1,632, pupils 185,712; intermediate 12, pupils 6,692; grammar 79, pupils 26,735; technical 115, students 31,209; institutions of higher education 2, students 350; Queen's university of Belfast, students 2,686.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): oats 340 (286); potatoes 1,453 (1,364); wheat 2·1 (1·9); barley 6·5 (3·4); dredge corn 5·9 (5·3); hay 701 (595). Livestock ('000 head, 1950): cattle 974; sheep 571; pigs 512; goats and kids 92; horses 51; asses 5·3; poultry 20,704. Food sales (1949-50): milk (million gallons) 88; eggs (million dozen) 53; beef (cwt.) 419,841; veal (cwt.) 2,071; pigmeat (cwt.) 383,948; mutton and lamb (cwt.) 92,973. Shipments of food to Great Britain (1949-50): milk (million gallons) 25·0; eggs (million dozen) 39·7; bacon and ham (cwt.) 276,957; poultry (tons) 6,800.

Industry. Electricity sales (million kwh., 1948; 1949 in brackets): 467 (533). Merchant vessels launched (1948; 1949 in brackets): 13 (12), gross tonnage 102,289 (97,353). Exports of yarns ('000 cwt., 1949): linen 67; woollen 32; cotton 11; hemp 9.

Foreign Trade. (Estimates compiled from the returns of the harbour authorities and the Board of Customs and Excise, £ million, 1948; 1949 in brackets) imports 177·4 (188·7) of which 141·1 (152·8) from and through Great Britain; exports 156·9 (163·9) of which 147·9 (154·8) to and through Great Britain. Main direct sources of imports, excluding Great Britain (1949): Irish republic 30·6%; Canada 11·7%; Belgium 11·4%; U.S. 5·7%. Main direct destinations of exports, excluding Great Britain (1949): Irish republic 38·1%; India 12·0%; U.S. 8·4%. Main imports (1949): machinery 7·7%; cotton goods (including goods sent for finishing, etc.) 7·0%; grain and flour 5·7%; coal 4·9%. Main exports (1949): linen and rayon piece-goods 18·9%; cotton goods (including goods returned after finishing, etc.) 8·7%; apparel 7·1%; machinery 6·8%.

Transport and Communications. Roads (1950): 13,254 mi. Licensed motor vehicles (Dec. 1949): cars 47,618; commercial 22,663. Railways: (1949): 754 mi.; passengers carried (1948) 15,244,735; goods carried (1948) 1,946,847 tons; livestock transported (1948) 708,418 head. Telephones (Oct. 1950): subscribers 42,838.

Finance and Banking. Budget: (1949-50 actual) revenue £43,191,307, expenditure £42,908,914; (1950-51 est.) revenue £63,577,000, expenditure £47,504,000, excluding contribution of £16 million to the U.K. exchequer. National debt (March 1949; March 1950 in brackets): £28,666,725 (29,361,166). Currency circulation (Sept. 1950): £9,693,979. Savings and deposits (Sept. 1950): £105,000,000.

See Ulster Yearbook (H.M.S.O., Belfast, 1950).

NORTHERN RHODESIA. British protectorate on the plateau of central Africa. Area: 284,745 sq.mi. Pop.: (1937 est.) 1,440,000; (1950 est.) 1,679,100 incl. 36,000 Europeans. Religion: Africans 75% pagan, remainder Christian. Chief towns (European pop. 1949 est.): Lusaka (cap., 4,290), Kitwe (4,006), Luanshya (3,677). Administration: governor; executive council, 7 official and 4 unofficial members; Legislative Council, speaker, 9 official members and 14 unofficial (10 elected European and 4 nominated to represent African interests). Governor, Sir Gilbert Rennie.

History. Livingstone airport, the largest and most up-to-date in Africa, built at a cost of about £1 million, was opened

in Aug. 1950 by the British minister of civil aviation, Lord Pakenham. With a runway of 7,500 yd. it was claimed to be adequate for all British aircraft in production or contemplated. Northern Rhodesia was to have official representation at the discussions to be held in London early in 1951 on the closer association of the Rhodesias and Nyasaland and had also accepted the recommendations for the establishment of the Rhodesia-Nyasaland secretariat and inter-territorial conference to replace the Central African council (*q.v.*). The territory presented two pairs of bronze brackets for the mace in the new House of Commons in London.

Preliminary surveys were completed for the railway link between the systems of Rhodesia and those of east Africa, and for the control of the flood waters of the Kafue river. The latter is the first step in the Kafue gorge hydro-electric scheme. The information department arranged with a British manufacturer for the production of a cheap battery wireless receiving set suitable for sale to Africans. Some 2,000 were already sold and this enabled the department to obtain far wider dissemination of news, educational and entertainment broadcasts than in any other British dependency in east or central Africa. A town plan for Lusaka was completed, providing for a final population of 22,500 Europeans and 80,000 Africans. Financial aid to the extent of £5 million was promised by the government to local authorities in the protectorate for their building programmes.

In March heavy floods caused some loss of life, destruction of stock and damage to property; the railway suffered serious breaches in three places and one bridge was put out of action. A party of four officials who were investigating the Kariba gorge were killed by a landfall caused by the floods. A national park of 8,650 sq.mi. was proclaimed in the central Kafue basin.

The protectorate benefited by the rapidly increasing prices for metals. Mineral production was valued at £36,388,920 in 1949, a record and nearly three times the prewar average. Five of the largest mining companies operating in the protectorate announced their intention to change their domicile from London to Northern Rhodesia.

Finance and Trade. Currency: Southern Rhodesian pound at par with sterling. Budget (1949 revised): revenue £9,825,068, expenditure £9,561,154; (1950) revenue £11,758,000, expenditure £11,676,055. Foreign trade: (1949) imports £21,266,000, exports £33,122,000; (Jan.-June 1950) imports £12,479,000, exports £21,385,000. Principal exports: (1949 totals) copper (blister and electrolytic) £26,900,637, zinc £1,931,279, lead £1,931,279 and tobacco £754,014. (G. R. MN.)

NORWAY. Constitutional monarchy of northern Europe, bounded N. by the Arctic ocean, E. by Finland, the U.S.S.R. and Sweden and S. and W. by the North sea. Area (excluding Svalbard archipelago*): 125,147 sq.mi. Pop.: (1946 census) 3,123,338; (mid-1949 est.) 3,233,000. Languages: Norwegian and Lappish (20,000). Religion: Lutheran. Chief towns (pop., 1948 est.): Oslo (*q.v.*) (cap., 418,000, after extension of city limits); Bergen (108,933); Trondheim (56,444); Stavanger (42,218). Ruler, King Haakon VII; prime minister, Einar Gerhardsen.

History. The Storting was formally constituted on Jan. 17 after being elected with an increased Labour majority on Oct. 10, 1949. The election result did not produce any change in the composition of the Labour government nor were any changes made in the course of 1950. The absence of Communists in the new parliament facilitated its work with regard to the many questions of defence and foreign policy which arose in the course of the year. The government enjoyed the unanimous support of all five parties in the parliament on these questions, and there was also a large measure of agreement on domestic, including economic, matters.

Norway entered 1950 with a continued high level of economic activity, with employment, production, investment and trade all exceeding the best prewar figures. Progress during the year was maintained in practically all sectors. Agriculture was able to resume the prewar export of eggs and butter, in forestry the timber-cutting target was almost reached, and in fishing the herring catch was the heaviest in any year except 1948. The merchant fleet exceeded five million gross tons for the first time, and the number of tourists was larger than ever before. The output of industry in the first nine months was 39% above the 1938 production index figure.

Despite these achievements the heavy foreign trade deficit continued, the adverse terms of trade being accentuated by devaluation. Exports increased at a greater rate than imports during 1950, but nevertheless the excess of imports over exports at the end of the first nine months was £81 million compared with £73 million in the same period of 1949. Aid under the European Recovery programme helped to bridge the gap between imports and exports, and the earnings of the merchant fleet also made a decisive contribution.

In April subsidies were reduced from about £40 million to £30 million a year. The price of a number of foodstuffs increased appreciably, and the cost of living index rose from 159·4 in March to 179·5 in September (1938=100). Negotiations in October between the workers' and employers' representatives under the chairmanship of the prime minister resulted in agreement to increase the pay of adult workers by 2*d.* an hour and to make further increases in 1951 should the index rise another five points or more. It was also agreed to prolong by a year the basic wage tariff agreement due to expire in 1951.

To accelerate military preparedness, the parliament was asked to approve an additional £12 million for defence to be spread over 30 months from July 1, 1950, to Jan. 1, 1953. The ordinary defence allocation in the 1950-51 budget was £14 million. The parliament unanimously approved the additional appropriation on Sept. 20, and also gave unanimous support to a new defence tax and increased sales tax to raise the money needed. The government took steps to cut investments by 10% to make materials and manpower available for the building of military installations and air raid shelters.

In August the government had made proposals for revising and strengthening the provisions for punishing treason and furnishing the executive with emergency powers during war or threat of war. The extent of these proposals was criticized in some Liberal as well as Communist quarters. Addressing the parliament in September the prime minister urged the need for national unity and, although not thinking that a coalition government was necessary or desirable, felt that the serious international situation should exert some influence on policy. The government would not, therefore, carry out its proposals for nationalizing sugar, solid fuel and medicinal supplies.

Under the Military Aid agreement signed in Washington in January and approved by the parliament in February, Norway in 1950 began to receive substantial supplies of military equipment from the U.S. During following months Norwegian representatives took part in the work of integrating western defences, and Dag Bryn, state secretary to the Ministry of Defence, was appointed Norway's permanent delegate to the deputies' council set up by the North Atlantic treaty foreign ministers at their London meeting in May. Norwegian naval and air units held joint manoeuvres with Danish units twice during the year, and Norwegian fighter aircraft participated in Western air practices in England.

* Svalbard archipelago (Spitsbergen and Baer Islands): area, 24,295 sq.mi. The population, largely miners, shifts seasonally; in 1939 it was estimated at 2,210, including 1,500 Russians.

In January the Norwegian government gave *de jure* recognition to the Chinese people's government in Peking, and at the autumn session of the U.N. general assembly in New York the foreign minister, Halvard M. Lange, urged that the Peking government should represent China in United Nations' organizations. The U.N. resistance to North Korean aggression was wholeheartedly supported in Norway, and a large Norwegian freighter was put at the disposal of the U.N. forces.

Although participating actively in the Council of Europe, the foreign minister argued on a number of occasions that a European union was not sufficient in itself and that the aim must be to establish an Atlantic community, politically as well as economically and militarily, embracing the U.S. as well as western Europe.

Norway also participated actively in the Organization for European Economic Co-operation, and carried out the decision to extend the liberalization of trade by including Belgium, Germany and Switzerland on the free import lists, thus increasing the proportion of Norwegian imports from other O.E.E.C. countries from 53% to 60·9%. On many occasions, however, ministers expressed fears about the adverse effects of liberalization on Norwegian economy, but the position was made rather easier by the conclusion of the European Payments union by which Norway was granted $60 million, of which $50 million was a gift, to establish an "initial position." In October Norwegians were allowed £15 a year for travel in other E.P.U. countries.

Norway, Denmark, Sweden and Great Britain signed on Jan. 30 an agreement for relaxing somewhat the restrictions on current payments and capital movements, although Norway was unable to relax restrictions to the same extent as the other three countries. An Anglo-Scandinavian Economic committee was set up which met in Oslo in November. The Anglo-Norwegian Economic committee met three times in 1950, and a new monetary agreement between the U.K. and Norway was signed on Nov. 6.

The commission set up in 1948 to consider the establishment of a Scandinavian customs union reported in January that there was no adequate basis at present for such a union. Subsequent Scandinavian conferences and statements suggested, however, that efforts would go on to achieve at least some of the elements of a customs union. An officially sponsored scheme to export electricity from Norway to Denmark was strongly criticized by some Norwegian industrial associations and no final decision was reached in 1950. On the other hand the transport ministers of Norway, Denmark and Sweden agreed in Oslo in November on a complete merger of their national airlines.

King Haakon and Crown Prince Olav attended the funeral of King Gustaf in Stockholm in November. Earlier in the year, King Haakon visited north Norway and Denmark on board the royal yacht. In the autumn Crown Prince Olav and Crown Princess Martha visited London; in November they visited the United States. Prominent visitors to Norway in 1950 included Eleanor Roosevelt, who unveiled a statue of Franklin D. Roosevelt in Oslo.

Prominent Norwegians who died in 1950 were Anders Sandvig, founder of the Folk museum at Lillehammer (Feb. 11); Johanne Dybwad, considered to be Norway's greatest actress (March 4); Egil Sundt, director general of the state railways (Sept. 6). The mayor of Oslo, H. E. Stokke, was appointed to succeed Sundt.

Education. Government schools (1946-47): elementary 5,626, pupils 289,449, teachers 10,766; secondary 277, pupils 42,112, teachers 5,090. Technical schools: day 9, pupils 1,805, teachers 233; apprentice 84, pupils 8,481, teachers 940; workshop 144, pupils 2,810, teachers 330. Non-government schools (1946-47): elementary 42, pupils 1,510; secondary 11, pupils 2,244. Teachers' training colleges (1947-48) 10, students 1,555. Universities (1948) 2, students 9,115. Institutions of higher education (1948) 8, students 1,327.

Agriculture and Fisheries. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 67 (67); barley 86; oats 163; rye 2 (2); potatoes 1,072. Livestock ('000 head, June 1949): cattle 1,222; sheep 1,808; pigs 419; horses 198; chickens 3,700. Food production ('000 metric tons, 1949; 1950, six months, in brackets): milk 1,545; butter 10·7 (6·6); cheese 20·9 (14·8); meat 81. Fisheries ('000 metric tons, 1948; 1949 in brackets): total catch 1,386·5 (1,165·7). Value of total fishery production (million kroner, 1948; 1949 in brackets) 338 (332).

Industry. Industrial establishments, excluding electrical plants, construction and building industries (1948): 5,911; persons employed: 32,273 salaried staff and 189,067 workers; gross value of production Kr. 6,399·4 million. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 455 (218); manufactured gas (million cubic metres) 43·5 (24·4); electricity (million kwh.) 15,183 (8,618). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): pig-iron 230 (107); pyrites 745 (399); ferrosilicon, calculated 45% basis, 65·9 (30·7); other ferro-alloys 103·4 (42·2); aluminium 35·0 (21·0); copper 9·0 (4·7); nickel 9·9 (4·7); zinc 41·0 (20·7); sulphur 81·2 (47·6); woodpulp, wet basis, 623 (377). Manufactured goods ('000 metric tons, 1949; 1950, six months, in brackets): cellulose, dry basis, 429 (240); cement 592 (294). Merchant vessels of 100 gross tons and upwards launched (1949; 1950, six months, in brackets) 47 (29); total tonnage 59,213 (32,508). New houses completed (1949) 17,751. Index of industrial production (1937 = 100) (1949; 1950, six months, in brackets) 132 (147).

Foreign Trade. (Million kroner, 1949; 1950, six months, in brackets) imports 4,218·0 (2,571·5); exports 2,138·3 (1,289·2). Main sources of imports (1949): U.K. 21·5%; Sweden 14·2%; U.S. 14·1%; Belgium-Luxembourg 6·6%. Main destinations of exports: U.K. 18·2%; Sweden 9·1%; Denmark 7·1%; U.S. 7·0%. Main imports: ships and boats 20%; textiles 11%; coal, petroleum and products 10%; machinery 8%. Main exports: woodpulp and paper 26%; fish and products 20%; fats and oils 17%; non-ferrous metals and products 10%.

Transport and Communications. Roads (June 1949): 27,495 mi. Licensed motor vehicles (Dec. 1949): cars 60,700; commercial 51,300. Railways (1949): 2,484 mi.; passenger-mi. (1948-49) 1,017 million; freight net ton-mi. (1948-49) 782 million. Shipping (July 1949): number of merchant vessels of 100 gross tons and over 2,071; total tonnage 4,917,226. Air transport (1949): mi. flown 4·1 million; passenger-mi. 83·7 million; freight net ton-mi. 2·1 million. Telephones (1948): 400,200. Wireless licences (1949): 709,116.

Finance and Banking. (Million kroner) budget: (1949-50 actual) revenue 2,541, expenditure 2,531; (1950-51 est.) balanced at 2,562, including expenditure on subsidies 600, defence 300, capital investment 157, repayment of public debt 128. National debt (Dec. 1948; Dec. 1949 in brackets): 14,220 (12,472), including foreign 1,110 (1,287). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 2,135 (2,136). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 92·8 (109·7). Deposit money (Aug. 1949; Aug. 1950 in brackets): 2,953 (2,905). Monetary unit: *krone* (pl. *kroner*) with an exchange rate (Nov. 1950) of Kr. 20·0 to the pound and Kr. 7·14 to the U.S. dollar.

(O. F. K.)

NURSING. In England and Wales the re-arrangement of hospital services under the hospital management committees was beginning by 1950 to be reflected in the regrouping of hospitals for the training of nurses. In some of the typical larger hospital management committees the new plans provided for the extension of the more important general training schools and for the regrouping of other small or specialized units, together with newly established "geriatric departments" (*i.e.*, special facilities for looking after the aged sick), into assistant nurse-training schools; and much thought was also given to improving accommodation for nurses and to devising schemes whereby girls leaving school might be helped to "bridge the gap" until they were old enough to start training. As a result of this and also of many earlier reforms, such as improved catering, the shortening of hours to a 96-hr. fortnight, the provision of preliminary training schools and new scales of pay and allowances, there was a sharp upward swing in the total number of nurses employed in the hospitals: figures given officially by the Ministry of Health showed that up to the end of June 1950 the total strength was 159,927 (*cf.* 136,116 in July 1948), including 134,689 whole-time nurses (*cf.* 118,736 in 1948). Mental hospitals however and sanatoria for tuberculosis were still hard put to find sufficient staff: many beds in these hospitals had to remain empty for lack of nursing staff.

A reconstituted General Nursing council was elected in

accordance with the Nurses act, 1949, which allowed greater freedom to bring the education of nurses into line with other forms of higher education (the matter was discussed in "Nurse-Training and Legislation," *Brit, M. J.*, Sept. 3, 1949). It was expected that "area nurse-training committees" would shortly be constituted and that the cost of training would be separated from the cost of the hospital.

Among publications issued during the year was a revised edition of a memorandum by King Edward's Hospital Fund for London on the supervision of the nurses' health; this took account of recent advances in methods of combating tuberculous infection and urged the immediate diagnosis of all cases of tuberculosis admitted to the wards and their segregation into wards specially allotted to them. (*See* also HOSPITALS.) (A. G. L. I.)

NUTS. In many countries nuts were more readily available to the consuming public in 1950 than they had been for many years. There was also greater variety. This was explained by the gradual return to more normal conditions after World War II and to the heavy crop of nuts after the fine summer of 1949 in many European countries. A notable feature was the high quality of some of the southern European walnuts, chestnuts and hazel nuts. Among shelled nuts or kernels there was also good quality in the consignments of Sicilian and Spanish almonds, notably jordan and Valencia almonds. ("Jordan" almonds have no connection with the river Jordan, the name being derived from the French *jardin*, signifying cultivated. Most so-called Valencia almonds come from parts of Spain other than Valencia). Peanuts in the shell could also be bought in shops in Britain for the first time for many years. The high price of peanuts, compared with prewar years, was a serious factor for food-manufacturing or processing firms wishing to use these nuts in bulk.

Another nut, which had not been on sale since the beginning of World War II, re-appeared. This was the so-called "Paradise" or "Sapucaia" nut. Like the Brazil nut it is the product of a large forest tree (*Lecythis usitata*) which occurs in the Amazon region. The nut resembles the Brazil nut in size and shape and in the palatability of the kernels, which are slightly softer and sweeter than those of the Brazil nut. The "Sapucaia" tree responded well to cultivation in Trinidad and other parts of the tropics, but bats, rodents and other animals which might even take the nuts before they fell to the ground, would perhaps make large-scale production difficult.

The east African oyster nut (*Telfairia pedata*) is another tropical nut which appeared in some retail shops during the year. This unusual and little-known nut was becoming better known overseas in the late 1930s but had not been seen on the English market for about a decade as a result of World War II. It is the seed of a gourd, produced by a large climber, and is disc-like in shape and covered with a fibrous net-work. The shell is not hard and brittle like that of most nuts but is relatively soft (though tough) and may easily be slit open with a pocket knife. The kernel is rich in oil and protein and proved satisfactory in nut chocolate. If suitable mechanical means for shelling the nut could be devised its cultivation on a larger scale, not only in east Africa but elsewhere in the tropics, could be undertaken. (F. N. H.)

NYASALAND. British protectorate in central Africa. Area: (incl. lakes) *c.* 47,949 sq.mi.; (land only) *c.* 38,800 sq.mi. Pop.: (1945 census) 2,049,917; (1950 est.) *c.* 2,500,000, incl. *c.* 4,000 Europeans and *c.* 4,300 Asiatics. Religion: Africans mostly pagan, a large minority Christian. Chief towns: Zomba (cap.), Blantyre, Limbe. Administration: governor; executive council, 3 *ex officio* and 4 nominated members; Legislative Council, 9 official and 9 unofficial members. Governor, Sir Geoffrey Colby.

History. Nyasaland was to be represented at the conference in London early in 1951 on closer association with the Rhodesias. It agreed in 1950 to take part in the Rhodesia-Nyasaland secretariat and inter-territorial conference to replace the Central African council (*q.v.*). Nyasaland presented a silver-gilt triple inkstand and a silver ashtray to the House of Commons in London.

The Colonial Development corporation completed plans to plant 18,000 ac. of tung trees in northern Nyasaland. The first 1,000 ac. would be planted by 1952 and thereafter at the rate of 3,000 ac. a year. Full production was expected in 1961, when the annual output of oil was estimated at 6,250 tons. The construction of main roads costing £450,000, was contemplated.

Finance and Trade. Budget (1950 est.): revenue £3,119,629; expenditure £3,235,677. Foreign trade (1949): imports £5,682,100; exports £4,681,733. Principal exports (1949 totals): tobacco £2,250,000, tea £1,171,000. (G. R. MN.)

NYLON: *see* RAYON AND SYNTHETIC FIBRES.

OATS: *see* GRAIN CROPS.

OBITUARIES. The following is a selected list of prominent men and women who died during 1950:—

Alessandri Palma, Arturo, Chilean statesman (b. Linares, Chile, Dec. 20, 1868—d. Santiago de Chile, Aug. 24), was early attracted to Liberal politics and was elected a deputy in 1897, holding his seat until he became a senator in 1915. After holding various portfolios he became prime minister (with the portfolio of the interior) in 1918. Elected president in 1920, he tried to carry out a policy of separation of church and state, and various social and financial reforms, but was deposed by a military *junta* in 1924. Alessandri was soon recalled, however, and succeeded in implementing his policy, but then resigned and left the country. He returned in 1931 during the world depression, was again elected a senator and suceeded the military dictator Carlos Ibáñez as president, with a large majority, in 1932. He was finally defeated in 1938 by a Popular Front candidate.

Allgood, Sara, Irish actress (b. Dublin, Oct. 31, 1883—d. Hollywood, California, Sept. 13), made her first appearance, with the Irish National Theatre society, in Dublin, Feb. 1904, and acted in the opening performance of the Abbey theatre in December of the same year. During her long career in leading parts at the Abbey she appeared in nearly all the plays of Yeats, Synge and the other writers of the Irish drama renaissance; she was noted for her performance as Juno Boyle in Sean O'Casey's *Juno and the Paycock*. She also appeared on many occasions in London and in repertory in Manchester and Birmingham. After appearing on the stage for the last time in New York in 1940 she settled in Hollywood and played character parts in films (she made her first film appearance in 1929 in *Blackmail*, the earliest British talking picture).

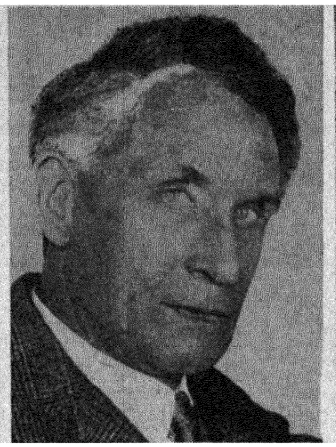
Arnold, Henry Hartley, U.S. army air corps general (b. Gladwyn, Pennsylvania, June 25, 1886—d. Sonoma, California, Jan. 15), learnt flying at the Wright brothers' flying school near Dayton, Ohio, in 1911. He served in World War I and later in various flight and administrative posts in the U.S. He was appointed chief of the U.S. army air corps in 1938. In May 1941 he was made deputy chief of staff in charge of the air corps, with the rank of major general. In 1943 he advanced to full general, and in Dec. 1944 was promoted to general of the army. Arnold continually stressed the importance of strategic bombing, and himself supervised the B-29s of the 20th air force that bombed Japan in World War II. He retired in 1946.

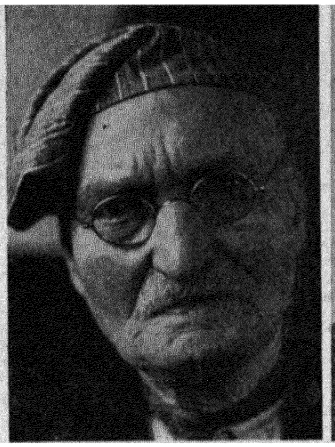
Ault, Norman, English writer (b. Dec. 17, 1880—d. Oxford, Feb. 6), was best known as an authority on Alexander Pope, and was responsible for *Pope's Own Miscellany* (1935), *The Prose Works of Alexander Pope*, of which volume I only appeared in 1938, and *New Light on Pope* (1948). He also contributed to the *Cambridge Bibliography of English Literature*.

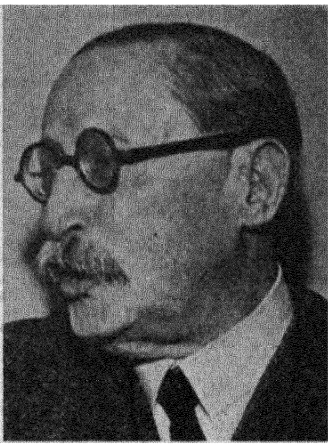
Bangor, Maxwell Richard Crosbie Ward, 6th Viscount, Northern Ireland parliamentarian (b. May 4, 1868—d. Downpatrick, Co. Down, Nov. 17), was elected an Irish representative peer in 1913 and speaker of the Northern Ireland Senate in 1930.

Barker, Sir Herbert Atkinson, British manipulative surgeon (b. Southport, Lancashire, April 21, 1869—d. Lancaster, July 21), was educated at Kirby Lonsdale Grammar school and by private tutors. He was intended for a legal career, but early showed an aptitude for manipulative surgery and in 1889 became assistant to his cousin John Atkinson, a London bone-setter. On the latter's death in 1904, Barker took over the practice, specializing in the correction of abnormalities of the joints by manipulation, and the cure of derangements of knee cartilages and flat feet. Although he performed a large number of successful operations, the medical profession refused to admit him officially to their ranks; a qualified practitioner was struck off for acting as his anaesthetist. During World War I Barker's offer to give free treatment to army personnel was rejected, owing to the opposition of the army medical authorities; however, he in fact treated a large number of soldiers. A demand arose that his services should be recognized by the conferment by the archbishop


Sara Allgood


Sir Herbert Barker


Tom Beasley


Léon Blum

of Canterbury of the Lambeth degree of Doctor of Medicine (which, however, would not, had it been given, have admitted him to the medical register). Nevertheless, as a result of a petition to the prime minister from many distinguished surgeons, Barker was knighted in 1922. His work was finally recognized by an invitation to demonstrate at St. Thomas's hospital in 1936, and films were made of a similar demonstration in 1939. Barker was contributor of the article on manipulative surgery in *Encyclopædia Britannica.*

Beasley, Thomas, British swordsmith (b. Birmingham, Sept. 8, 1860—d. Acton, Middlesex, Oct. 12), whose forbears for 250 years had been swordsmiths, started work at the forge at the age of eight and worked nearly all his life for the Wilkinson Sword company, London. He made ceremonial swords for five British sovereigns, the Stalingrad sword and the sword presented to General Dwight D. Eisenhower by the City of London.

Bell, Aubrey FitzGerald, British student of Iberian literature (b. Muncaster, Cumberland, Aug. 20, 1881—d. Victoria, British Columbia, May 7), began a period of 30 years of residence in the Iberian peninsula with the publication in 1912 of *The Magic of Spain.* In 1922 he published his monumental *Portuguese Literature and Biography* and, in 1924, *A Pilgrim in Spain.* He was responsible for the *Oxford Book of Portuguese Verse* (1925), and among his later works were the comprehensive *Castilian Literature* (1938) and *Cervantes* (1947).

Bennett, Frederick Augustus, New Zealand bishop (b. Ohinemutu, N.Z., 1872—d. Kohupatiki, near Hastings, N.Z., Sept. 16), the son of a Maori high chieftainess, was ordained in 1896. He was the first Maori bishop, being appointed suffragan of Aotearoa in 1928.

Berners, Gerald Hugh Tyrwhitt-Wilson, 9th Baron, British author, painter and composer (b. Sept. 18, 1883—d. London, April 19), held an honorary post in the diplomatic service from 1909 to 1920. In 1923 his first opera, *Carosse du Saint Sacrement,* was produced in Paris. This was followed by several ballets: *The Triumph of Neptune* (1926); *Luna Park,* part of C. B. Cochran's 1930 Review; *A Wedding Bouquet* (1937); *Cupid and Psyche* (1939); and *Les Sirènes* (1946). His literary output consisted largely of novels in fantastic vein, but included two autobiographical works. Exhibitions of his paintings were held in 1931 and 1936.

Bird, Sir William Barrott Montfort, British politician and solicitor (b. Wilmington, Kent? July 11, 1855—d. Eartham, near Chichester, Sussex? Nov. 13), was master of the Salters' Company, 1919-20, and of the Makers of Playing Cards company. He was Unionist M.P. for Chichester 1921-23. He was knighted in 1920.

Blum, Léon, French statesman (b. Paris, April 9, 1872—d. Jouy-en-Josas, near Versailles, March 30), was son of a wealthy wholesale haberdasher. After attending the Lycée Charlemagne he went on to the Ecole Normale Supérieure and there came under the influence of Lucien Herr, an ardent Socialist, who introduced him in 1896 to Jaurès. After graduating he preferred the civil service to teaching and joined the Conseil d'Etat. By 1914, as literary critic of the *Revue blanche* and dramatic critic of *Comoedia,* and author of two controversial books (*Du Mariage* and *Stendhal et le beylisme*), he had become a well known social figure. Although a member of the Socialist party from 1899 he did not enter active politics before World War I. In 1919 he was made chairman of the party executive committee and elected to the Chamber of Deputies. In 1920 he opposed the affiliation of his party to the Comintern. In 1921 he took over *Le Populaire* which he developed into an influential newspaper and edited it until 1940. At the head of the Socialist parliamentary group he was an uncompromising leader of the opposition. After the elections of 1936, on June 4, Blum became prime minister—the first Jew and the first Socialist to hold this position. His tenure of office was not an easy one as in the Chamber of Deputies he depended on Communist and in the Senate on Radical (that is, middle class) support. Nor was the introduction of the 40-hr. working week the right answer to German rearmament. His popular front experiment failed and he was defeated in the Senate on June 21, 1937. In 1938 he was again premier but only for a month (March 10-April 10). After the capitulation of 1940, on Sept. 15, he was arrested by the Vichy authorities. With other leaders, in Feb.-March, 1942, he was tried at Riom on charges of "betrayal of his duty" and warmongering. His defence was a defiant counter-attack which virtually placed Marshal Philippe Pétain and his men in the dock. No verdict was reached, and Blum's trial was never concluded. In prison, he found the energy to write a book, *A l'Echelle humaine* (translated into English under the title *For All Mankind*), in which he justified his democratic faith. In March 1943 he was delivered to the Germans who interned him near Buchenwald. In April 1945 he was transferred to the concentration camp of Dobbiacco, in the Italian Tirol, and a month later was liberated by the Americans. Returning to France he took a very active part in the life of his party. He opposed the tendency of "uniting" Socialists and Communists and on more than one occasion reminded his party of the necessity of collaboration with the Christian Democratic M.R.P. On Dec. 17, 1946, he formed a Socialist caretaker government, and resigned on Jan. 16, 1947.

Booth, Evangeline Cory, former Salvation Army general (b. Hackney, Middlesex, Dec. 25, 1865—d. New York, July 17), was the seventh child of William Booth, founder of the Salvation Army. She began Salvationist work at the age of 16, and was commissioner in London at the age of 23. Eight years later she became commander of the Canadian organization and, in 1904, of the Army in the United States. She was elected the third general of the Army in 1934.

Boucicault, Nina (MRS. D. INNES-SMITH), British actress (b. London, Feb. 27, 1867—d. Ealing, Middlesex, Aug. 2), was the original Kitty Verdun in Bransby Williams' *Charley's Aunt* at the Royalty theatre in 1892, and created the name part in James Barrie's *Peter Pan* in 1904. Her last appearance was as the Countess Mortimer in Granville Barker's *Waste* at the Westminster theatre in 1936.

Bowen, David, British lawyer (b. Pentre, Rhondda, Glamorganshire, Feb. 13, 1885—d. Richmond, Surrey, Nov. 27), started work as a pit-boy at the age of 12. He was head of the mining department, Leeds university, 1911-13. After practising as a consultant and serving in World War I he was called to the bar in 1920. He became a recognized authority on mining law, about which he wrote a number of books, and contributed the section on mining to Lord Hailsham's *Halsbury's Laws of England.* He took silk in 1938.

Bowman, Isaiah, U. S. geographer and university president (b. Waterloo, Ontario, Canada, Dec. 26, 1878—d. Baltimore, Maryland, Jan. 6), Studied and taught at the State Normal college, Ypsilanti, Michigan, and at Harvard and Yale universities. During this period he led or participated in three field expeditions to South America. He was director of the American Geographical society from 1915 to 1935. At the close of World War I he was chief territorial specialist and adviser to President Woodrow Wilson in the negotiation of the treaty of Versailles. In 1935 he became president of Johns Hopkins university, Baltimore, Maryland. During World War II he was an adviser to the department of state, and he participated in the Dumbarton Oaks and San Francisco conferences which led to the organization of the United Nations in 1945. He was the author of 12 books and the editor of 2, and was formerly president of the Association of American Geographers, the International Geographical union and the American Association for the Advancement of Science. He retired as president of Johns Hopkins in 1948.

Bradbury, John Swanwick Bradbury, 1st Baron, of Winsford, Cheshire, British civil servant (b. Sept. 23, 1872—d. London, May 3), was appointed joint permanent secretary to the Treasury in 1913, and signed the first £1 and 10*s.* notes (nicknamed "Bradburys" for many years afterwards), which replaced gold coins at the beginning of World War I. As financial adviser to successive wartime prime ministers and chancellors he devised the policy of paying a large proportion of the cost of the war from current revenue, rather than one based on the expectation of extensive reparations from Germany. He was chief British delegate on the reparations commission, 1919-25, and was created a baron in the latter year.

Braid, James, British golfer (b. Earlsferry, Fife, Feb. 6, 1870—d. London, Nov. 27), started to play golf at an early age, but his disapproving parents apprenticed him to a joiner; in 1893 he moved to London as club maker to a department store. He later joined the Romford club as professional and quickly established himself as a golfer of note. He won the open championship five times and the *News of the World* match-play tournament four times. He was professional at Walton Heath for over 45 years.

Brocard, Félix Antonin Gabriel, French general and aviation pioneer (b. Biol, Isère, France, Nov. 14, 1885—d. Paris, May 29), obtained

his pilot's certificate in 1911 and was one of the first to appreciate the importance of the air arm in war. In the early part of World War I he organized a special squadron for employment on special missions. He later formed the famous *Cigogne* (Stork) squadron. Brocard was on the staff of the French air ministry, 1917-19, was a member of the Chamber of Deputies, 1924-36.

Bromfield, William, British politician (b. Jan. 24, 1870—d. June), was Labour M.P. for Leek, Stafford, 1918-31 and 1935-45.

Broster, Dorothy Kathleen, British historical novelist (b. 1878?—d. Bexhill, Sussex, Feb. 7), began to write in 1911. Among her earlier independent works was *Sir Isumbras at the Ford* (1918). *The Flight of the Heron* (1925), *The Gleam in the North* (1927) and *The Dark Mile* (1929) formed a trilogy celebrating " The Forty-five." Her last novel was *The Captain's Lady* (1947).

Brown, Leonard Graham, British ear, nose and throat surgeon and amateur athlete (b. Brisbane, Queensland, Sept. 6, 1888—d. London, May 23), was medical superintendent of Charing Cross hospital and a past president of the otology section of the Royal Society of Medicine. He played Rugby football for Queensland, 1908, for Oxford university, 1910-12, and for England on 18 occasions between 1911 and 1922, being captain in the latter year. He was president of the Rugby football union, 1948-49.

Brunei, Sir Ahmed Tajudin Akhazul Khair Wad-din, Sultan of (b. Sept. 2, 1913—d. Singapore, June 4), acceded in 1924. He was appointed honorary K.B.E. in 1949.

Buckley, Christopher Thomas Rede, British journalist (b. May 22, 1905—d. [on active service] Korea, Aug. 12), started his career as a schoolmaster but also began to establish himself as a free-lance journalist. In 1937 he went to Spain with the Friends' Service council's relief organization and reported the later stages of the Civil War for the *Christian Science Monitor*. He was in Warsaw in Sept. 1939 for the same journal. After a tour as a free-lance he joined the British legation press attaché's staff at Athens in 1940. Later in the same year he became a correspondent for the *Daily Telegraph*. During World War II he reported the various campaigns in Greece, Libya, Italy, Normandy and Norway. He wrote two novels and was commissioned by the War Office to write a history of the minor campaigns of the war.

Bull, Bartle Brennan, British lawyer and politician (b. Toronto, Canada, April 1, 1902—d. London, Oct. 17), practised on the southeastern circuit, before being Conservative M.P. for the Enfield division of Middlesex, 1935-45.

Burroughs, Edgar Rice, U.S. novelist (b. Chicago, Sept. 1, 1875—d. Encino, California, March 19), worked as a clerk, accountant, salesman, railway detective, cowboy, gold miner and advertising man. His first novel, *Under the Moon of Mars*, was sold under the pen-name of Normal Bean; he considered that his was the average mind which, he hoped, would attract the average reader. How well this hope was realized was seen in the fantastic success of his " Tarzan " books. He produced about 50 of them and left 15 more uncompleted at his death; thirty five million copies were sold. Ten Hollywood film actors in succession portrayed Tarzan, and it was estimated that each Tarzan film was seen by 140 million people. The books themselves were translated into 56 languages. Burroughs never set foot in Africa, the scene of his stories. During World War II, he was in the Pacific theatre as a war correspondent.

Butler, Kathleen Teresa Blake, British college principal and modern language scholar (b. Bardsea, Lancashire, Sept. 26, 1883—d. Cambridge, May 2), was educated in Hanover and Paris and at Newnham college, Cambridge. After teaching modern languages at Royal Holloway, Newnham and Girton colleges she was appointed mistress of the latter in 1942. She was joint founder and editor of *Italian Studies* and wrote a number of books on French and Italian literature. She was a strong advocate of full university status for women's colleges and a year before her retirement in 1949 Girton and Newnham were admitted into Cambridge university.

Çakmak, Fevzi, Turkish army officer (b. Istanbul, Jan. 12, 1876—d. Istanbul, April 10), was educated at the Kulili Military college and the General Staff academy in Istanbul. A lieutenant in 1895, he was appointed chief of staff of an army corps in 1910. He fought in the Balkan Wars of 1912-13 as commander of a division and in World War I as commander of an army corps and (in 1917-18) of an army. War minister in 1920, he resigned the commission and office granted him by the sultan and joined Kemal Atatürk's " rebellion " in Ankara. There he was made prime minister and minister of defence. Promoted to the rank of full general during the Greek invasion of Anatolia he resigned his premiership in 1922 and became deputy to Ismet Inönü, then chief of staff. After the victorious conclusion of the War of Liberation, he was promoted as the new republic's first marshal and appointed chief of staff, holding this position for 20 years (1923-43). With Kemal Atatürk as president of the republic (1923-38) and Ismet Inönü as prime minister (1923-37), he was one of the three statesmen who created modern Turkey. In the 1946 elections he stood as an independent and was elected with a great majority. In 1948 he accepted the honorary leadership of the Nation's (Conservative) party.

Carlile, Sir (William) Walter, 1st baronet, British politician (b. June 15, 1862—d. Newport Pagnell, Buckinghamshire, Jan. 3), was Conservative M.P. for North Buckinghamshire and for Buckingham from 1895 to 1906. He served with Sir Fabian Ware's unit of the Missing bureau in World War I and was created a baronet in 1928.

Casgrain, Pierre François, Canadian judge and parliamentarian (b. Montreal, Aug. 4, 1886—d. Montreal, Aug. 26), was called to the bar in 1910 and created a K.C. in 1920. He had been first elected to the Canadian House of Commons in 1917, and held his seat until 1940. He was chief Liberal whip, 1926-35, and speaker, 1936-40. He was secretary of state, 1940-41, and, retiring from politics in Dec. 1941, became a judge of the Quebec superior court.

Cave, Charles John Philip, British meteorologist and antiquary (b. 1871—d. Petersfield, Hampshire, Dec. 8), made important investigations of atmospheric structure and behaviour before World War I which were recorded in his *Structure of the Atmosphere in Clear Weather* (1912) and other books. Cave was president of the Royal Meteorological society, 1913-15 and 1924-26, and a fellow of the Royal Astronomical and Royal Photographic societies. His interest in telephotography led him to take photographs of the Winchester cathedral roof bosses, important keys to mediaeval sculptural style as they had escaped the iconoclasts. He later published valuable series of photographs of the bosses of Canterbury (1934), Winchester, Bristol (1935) and Lincoln (1949). His *Roof Bosses in Mediaeval Churches* appeared in 1948.

Caw, Sir James Lewis, British art historian and museum director (b. Ayr, Scotland, Sept. 25, 1864—d. Lasswade, Midlothian, Dec. 5), was an engineer for some years, but studied art in Scotland and on the continent, and in 1895 became curator of the Scottish National Portrait gallery. From 1907 until 1930 he was director of the Scottish National galleries. An ardent propagandist on behalf of Scottish art, he wrote *Scottish Painting, Past and Present, 1620-1908*, a standard work, two books on Raeburn and a number of others. He was knighted in 1931.

Charles, Sir Ernest Bruce, British judge (b. 1871—d. Deal, Kent, May 3), was called to the bar in 1896 and joined the western circuit. He later became commissary general of the diocese of Canterbury and was chancellor of Wakefield and Hereford, 1912-28, and of Chelmsford, 1922-28. He took silk in 1913. Charles abandoned his practice to serve throughout World War I, at first as a motor driver and later as director of the Wounded and Missing Enquiry department in France. He was recorder of Bournemouth, 1915-24, and of Southampton, 1924-28. In the latter year, he was appointed to the King's Bench division and was knighted; he retired in 1947.

Chatterton, Eyre, Anglican bishop (b. Monkstown, Co. Cork, July 22, 1863—d. Richmond, Surrey, Dec. 8), was the first bishop of Nagpur, India, 1903-26. He worked hard for the autonomy of the Church of India and was especially concerned with the needs of the Anglo-Indian community. He wrote a number of books on the Indian church, the most important being a *History of the Church of England in India since the early days of the East India Company* (1924). He was assistant bishop in the Canterbury diocese, 1926-30.

Chetwode, Philip Walhouse Chetwode, 1st baron of Chetwode, Buckingham, British field marshal (b. Sept. 21, 1869—d. London, July 6), was gazetted to the 19th Hussars in 1889, and took part in the Chin Hills campaign, Burma, in 1892. He was in South Africa, 1899-1902, and was present at the defence of Ladysmith. In the early part of World War I he was in command of 5 Cavalry brigade in France and Flanders, but took over the Desert column, in Egypt and Sinai, from 1916. He was then given, as part of General Allenby's force, XX corps which took part in the successful third battle of Gaza in 1917 and which later captured Jerusalem. Chetwode became deputy C.I.G.S. in 1920 and adjutant general in 1922. After his promotion to full general in 1926 he became A.D.C. general to King George V in 1927. He was commander in chief, India, 1930-35, being promoted field marshal in 1933. He served as constable of the Tower of London, 1943-48. He was chairman of the Red Cross and St. John War organization, 1940-47, and was created a baron in 1945.

Clapham, Sir Alfred William, British art historian (b. May 27, 1883—d. Ripon, Yorkshire, Oct. 26), after a period on the staff of the *Victoria County History* joined the staff of the newly formed Royal Commission on Historical Monuments for England as technical editor in 1913, also becoming secretary in 1933; he was appointed a commissioner on his retirement in 1948. He was president of the Society of Antiquaries of London, 1939-44, of the Royal Archaeological institute, 1945-48, and of the Council of British Archaeology, and was a fellow of the British Academy. He was knighted in 1944. He was best known for his work on pre-gothic architecture; his two-volume *Romanesque Architecture in England* was published in 1929 and 1934, and *Romanesque Architecture in Western Europe* in 1936.

Clark, Alfred, U.S.-born gramophone pioneer (b. New York, 1873—d. Fulmer, Buckinghamshire, June 16), joined Thomas A. Edison in the development of the phonograph in 1889, and, in 1895, produced at the Edison laboratory the first motion picture with plot and continuity. He also worked with Emile Berliner, inventor of the disc gramophone, in Washington, D.C. Bringing the gramophone to Europe, Clark joined the Gramophone company in London in 1899, and was chairman or managing director of the company from 1909 to 1945. When in the latter year the company was merged with Electrical and Musical Industries, Ltd., Clark became the new organization's first chairman. He also founded the French Gramophone company in 1899 and the Musée de la Voix in the archives of the national opera in Paris in 1907.

Cobb, Frederick Arthur, British politician (b. Feb. 11, 1901—d. London March 27), was Labour M.P. for the Elland division of the East Riding of Yorkshire, from 1945, and was returned for Brighouse and Spenborough in 1950.

Cobb, John William, British fuel technologist (b. Leeds, Feb. 6, 1873—d. Leeds, Nov. 25), was Livesey professor of coal, gas and fuel industries in Leeds university, 1912-38, and the research department he set up there was the first in England in this field.

Copley, John, British painter and lithographer (b. Manchester, June 25, 1875—d. London, July 16), came early under the personal influence of Ford Madox Brown. He began lithography in 1907, and with his wife Ethel Leontine Gabian (b. Le Havre—d. London, Jan. 30) was largely responsible for recovering it as an original art from the purely commercial uses into which it had declined. He is represented at the British museum, the Victoria and Albert museum, the Uffizi gallery, Florence, and in the New York Public library and City of Boston library collections. He was elected president of the Royal Society of British Artists in 1947.

Cripps, Lionel, Southern Rhodesian parliamentarian (b. Simla, India, Oct. 11, 1863—d. Umtali, S. Rhodesia, Feb. 4), was a member of the pioneer column which occupied Mashonaland in 1890. Elected to the Legislative Council for Southern Rhodesia in 1914, from 1924 to 1935 he was first speaker of the Assembly after responsible government had been granted.

Currie, George Welsh, British politician (b. 1870—d. Witley, Surrey, June 3), was Unionist M.P., Leith burghs, 1914-18, but later joined the Labour party and was a Labour member of the London County council, 1935-40. He was a church commissioner from 1948.

Curtis-Bennett, Sir (Francis) Noel, British civil servant and voluntary welfare worker (b. London, May 14, 1882—d. London, Dec. 2), had a distinguished career in the civil service, 1905-42. He was one of the founders of the National Association of Boys' Clubs and of the National Playing Fields association of which he was chairman for ten years. He was also chairman of the National Council for Physical Fitness. In 1932 he was created K.C.V.O.

Daggar, George, British politician (b. Pontypool, Monmouthshire, 1880—d. Abertillery, Monmouthshire, Oct. 14), began work in the coal mines at the age of 12, and later won a scholarship to the Central Labour college, working down the pit during vacations. He subsequently wrote and lectured on economic, industrial and political topics. He was Labour M.P. for the Abertillery division from 1929.

Damrosch, Walter Johannes, U.S. orchestral conductor and composer (b. Breslau, Germany, Jan. 30, 1862—d. New York, Dec. 22), whose childhood home was frequented by Richard Wagner, Franz Liszt and other famous musicians, was taken to the U.S. as a boy. In 1885 he became assistant director of the Metropolitan Opera company and conductor of the New York Symphony orchestra, and in 1894 formed his own touring opera company, which was largely responsible for popularizing the works of Wagner in the U.S. He later became noted for his radio programmes, during which he explained the music he conducted, and for his work in developing musical appreciation in children. He was the composer of several operas including *The Scarlet Letter*, *Cyrano de Bergerac* and *The Opera Cloak*.

D'Arcy, Dame Constance Elizabeth, Australian surgeon (b. Mudgee, N.S.W., June 1, 1879—d. Sydney, April 25), was lecturer in clinical obstetrics, Sydney university, from 1925, a member of the university senate, 1919-1949, and deputy chancellor in 1943. She was one of Australia's first women surgeons, and was created D.B.E. in 1935.

Da Silva, António Maria, Portuguese politician (b. 1872?—d. Lisbon?, Oct. 14), was minister of public works in Affonso Costa's governments of 1913-14 and 1915 and in António D'Almeida's National cabinet of 1916-17; he was premier twice in 1920, and again in 1922-23 and 1925-26. A firm opponent of dictatorship, he participated in several attempts to overthrow António de Oliveira Salazar.

David, Albert Augustus, British headmaster and Anglican bishop (b. Exeter, May 19, 1867—d. Trebetherick, Cornwall, Dec. 26), was headmaster of Clifton college, 1905-9, and of Rugby school, 1909-21. In 1932 he published *Life and the Public Schools*. He was consecrated bishop of St. Edmundsbury and Ipswich in 1921, and in 1923 was translated to Liverpool. He resigned the see in 1944.

Davies, Sir George Frederick, British politician (b. Honolulu, Hawaiian islands, April 19, 1875—d. Norton-sub-Hamden, Somerset, June 21), was Conservative M.P. for the Yeovil division of Somerset, 1923-45. He was a lord commissioner of the treasury from 1932 to 1935. Davies was vice chamberlain of H.M. household, 1935-37, and controller, 1937-38. He was knighted in 1936.

Davis, Sir (Steuart) Spencer, British colonial governor (b. 1875—d. London, April 3), held various senior civil service posts in the West Indies, Tanganyika and Palestine, and was governor of St. Helena, 1932-37. He was knighted in 1930.

Deeping, (George) Warwick, British novelist (b. Southend-on-Sea, Essex, May 28, 1877—d. Weybridge, Surrey, April 20), practised medicine for a short time, but later began writing, mainly in a popular vein. Of his many books, *Sorrel and Son*, published in 1925, was a best-seller and was made into a successful film.

Devonshire, Edward William Spencer Cavendish, 10th Duke of, British peer and politician (b. May 6, 1895—d. Compton Place, near Eastbourne, Sussex, Nov. 26), served during World War I in Egypt, the Dardanelles and France. In 1919 he was a member of the British delegation to the peace conference. From 1923 to 1938, when he succeeded to the dukedom, he was Unionist M.P. for the Western division of Derbyshire. He was parliamentary under secretary of state for dominion affairs, 1936-40, for India and Burma, 1940-42, and for the colonies, 1943-45. From 1938 he had been high steward of Cambridge university and chancellor of Leeds university. He was elected grand master of the United Grand Lodge of Freemasons of England in 1947 and 1948 and in Nov. 1950 was elected for a third time. He was created a Knight of the Garter in 1941.

Diomidis, Alexandros, Greek economist and statesman (b. Athens, 1875—d. Athens, Nov. 11), was educated in Greece, France and Germany. He joined Eleftherios Venizelos's Liberal government as minister of finance (1912-14). After World War I he retired from politics and in 1923 was elected governor of the National bank, at that time still the bank of issue, and negotiated important public loans, besides conducting negotiations which led to the creation of the Bank of Greece as the bank of issue (1928). Retiring from public life in 1930, he published in 1943 a two-volume work on the land policy of the Macedonian and Comnenus dynasties. Before World War II he was honorary president of the Supreme Economic council and from 1945 president of the Supreme Reconstruction board, and chairman of the board of the National bank. On Jan. 20, 1949, Diomidis joined the coalition government of Themistocles Sophoulis as a non-party deputy premier, and on the death of Sophoulis succeeded him on June 30 as prime minister of a Populist-Liberal coalition cabinet. He resigned on Jan. 5, 1950.

Dobbie, William, British politician (b. Ayrshire, Oct. 28, 1878—d. York, Jan. 19), son of a blacksmith, was an active trade unionist. He was Labour M.P. for Rotherham from 1933. He was twice lord mayor of York and was president of the National Union of Railwaymen, 1925-28 and 1930-33.

Dooley, James, Australian politician (b. Ireland, 1878?—d. Sydney, Jan. 2), was chief secretary and minister for housing, New South Wales, 1920-21, state premier, 1921-22, and speaker of the Legislative Assembly 1925-27.

Dunstan, Sir Albert Arthur, Australian politician (b. Cope Cope, Victoria, 1892—d. Melbourne, April 14), was minister of lands and forests of the state of Victoria, 1932-35, state premier, 1935-45, and minister of health from 1945. He was created K.C.M.G. in 1948.

Dybwad, Johanne, Norwegian actress (b. Aug. 2, 1867—d. March 4), made her debut in Bergen in 1887. Before her retirement in 1947 she had played over 200 roles, including Juliet in *Romeo and Juliet*, Rosalind in *As You Like It*, and the lead in Tolstoy's *Anna Karenina* and Euripides' *Medea*. She appeared as Aase in Henrik Ibsen's *Peer Gynt* at the Paris exhibition, 1937. Johanne Dybwad was considered the foremost interpreter of Ibsen and, by many, the greatest Scandinavian actress.

Eliash, Mordecai, Israeli diplomat (b. Uman, Ukraine, June 11, 1892—d. Hampstead, London, March 11), joined the Zionist bureau in London in 1917 and was general secretary of the Zionist commission to Palestine, 1919-21. After World War II he represented the Jewish National council before the U.N. special commission and at Lake Success. In Feb. 1949 he was appointed Israeli representative in London, and in July of the same year became first minister of Israel at the Court of St. James.

Enthoven, (Augusta) Gabrielle Eden, British theatrical archivist (b. London, Jan. 12, 1868—d. London, Aug. 18), had some success as a playwright, having four plays staged in London and New York between 1912 and 1930. Starting with a chance purchase of about 200 playbills in the late 1890s, she formed a collection of these and other important documentary and pictorial records of the London theatre, which grew so large by 1925 that it was moved from her home to the Victoria and Albert museum, Mrs. Enthoven herself becoming curator.

Esdaile, Katharine Ada (MRS. ARUNDELL ESDAILE), British art historian (b. April 23, 1881—d. East Grinstead, Sussex, Aug. 31), edited the first two volumes of the Vertue Notebooks for the Walpole society. Among her own books were *English Monumental Sculpture since the Renaissance* (1927), a monograph on Roubiliac (1929) and two under the title *English Church Monuments*—a handbook for the general reader in 1937 and a more comprehensive work in 1947.

Feldman, Asher, British rabbi (b. Russia, 1873—d. London, Dec. 13), became the first fellow of Jews' college, London, in 1896 and was



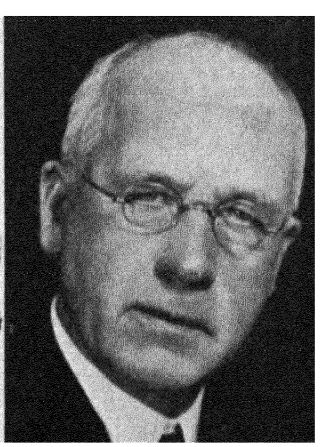
Evangeline Booth



Lord Chetwode



Sid Field



Peter Fraser

appointed *Dayan* of the London *Beth Din* in 1902, retiring because of ill-health in 1938. In 1911-13, after the death of the chief rabbi, Hermann Adler, he acted with Moses Hyamson in the chief rabbinate.

Field, Sid (SIDNEY ARTHUR FIELD), British comedian (b. Birmingham, April 1, 1904—d. London, Feb. 3), first appeared with the "Royal Kino Juveniles" at the age of 11 and at 14 was understudy to Wee Georgie Wood. From 1930 onwards, Field was under contract as a music-hall comedian, and became popular in many districts in his character of the slick, flashily immaculate "spiv." Although his contract enabled him to tour Australia in 1934, he was precluded from appearing in the West End of London until its expiry in 1943, when he appeared in George Black's *Strike a New Note*, at the Prince of Wales' theatre, and was an immediate success. This was followed by *Strike It Again* and *Piccadilly Hayride*. In 1946, he appeared in both the Royal Variety show and the Royal Command Film performance. Although he was able, on occasion, to transfer his stage acts to the screen, his films, *London Town* and *Cardboard Cavalier*, were considered disappointing. At the time of his death, he was playing the lead in the successful play, *Harvey*, in London.

Fraser, Peter, New Zealand statesman (b. Fearn, Ross-shire, Scotland, Aug. 28, 1884—d. Wellington, New Zealand, Dec. 12), became on leaving school a local officer of the Liberal party in Scotland and in 1908 joined the Independent Labour party. He went to New Zealand two years later and was active in the Labour movement. He was elected to the House of Representatives for Wellington Central in 1918, and in 1935 was appointed minister of education, health, marine and police and in 1939 deputy prime minister. In his government's famous programme of social services he was responsible for the ambitious national health scheme. On April 1, 1940, on the death of M. J. Savage, Fraser became prime minister. His party was defeated in the general election on Nov. 30, 1949, and he resigned on Dec. 7. From 1943 he had been also minister of external affairs and minister of island territories, and from Dec. 1946 native minister (renamed minister of Maori affairs in Dec. 1947). He also held the portfolio of employment from March to Dec. 1946. He served on the Wellington City council, 1919-23 and 1933-36. During World War II he attended meetings of the war cabinet in London, and in 1944, 1948 and 1949 attended the London meetings of the Commonwealth prime ministers. Fraser was created a privy councillor in 1940, a companion of honour in 1945, and in 1944 a freeman of the City of London and a burgess of Edinburgh.

Freeman, Sir Ralph, British civil engineer (b. Nov. 27, 1880—d. March 11), was concerned particularly with the design of steel bridges, including five in the Rhodesias (two of over 1,000-ft. span) and the Sydney harbour bridge, which was completed in 1932 and was the heaviest arch bridge in the world.

Gardiner, Henry Balfour, British composer and concert promoter (b. London, Nov. 7, 1877—d. Salisbury, June 28), began to have his work performed at important public concerts in 1904. Of his output, a symphony, a concert overture and a string quartet showed him to be a musician of considerable ability, and a short orchestral piece *Shepherd Fennel's Dance* became a popular favourite. He also did important work before World War I in bringing forward the works of then comparatively little-known British composers like Vaughan Williams, Arnold Bax and Percy Grainger.

Garibaldi, Giuseppe (PEPPINO), Italian army officer (b. Melbourne, Australia, 1879—d. Rome, May 19), was a grandson of the Italian liberator and son of General Ricciotti Garibaldi. In 1914, when his father formed a regiment of Italian volunteers to fight Germany in the ranks of the French Foreign legion, Peppino joined with his five brothers. When in May 1915 Italy joined the Allies, France authorized the *garibaldini* to serve in the Italian army, and Peppino, made lieutenant colonel of the *alpini*, distinguished himself at the Col di Lana. After the war he first sympathized with Mussolini, but opposed him after the murder of Giacomo Matteotti. In 1924 he emigrated to the United States and returned to Italy only at the beginning of 1940. Arrested by the Germans in 1943, he was later liberated by the Allies. During the electoral campaign of 1948 he protested against the misuse of the name of Garibaldi by the Communist-sponsored Popular Democratic front.

Gavrilo (Dožić), patriarch of the Serbian Orthodox Church (b. Morača, Montenegro, May 17, 1881—d. Belgrade, May 7), was of peasant stock. He was educated at Prizren, Athens and Istanbul. In 1910 he became bishop of Peć and in 1920 metropolitan of Crnagora and Primorje. Elected to the patriarchate of the Serbian Orthodox Church, vacant since the death of Patriarch Varnava (Peter Rošić) on July 24, 1937, he was enthroned on Feb. 21, 1938. He was one of the instigators of the *coup d'état* of March 27, 1941. After Germany had invaded Yugoslavia he was interned and in 1944 sent to the concentration camp at Dachau. Liberated on April 30, 1945, by the U.S. army, he lived for a time in Rome. He visited London to baptize the infant son Alexander of ex-King Peter of Yugoslavia (Oct. 24, 1945) and in Nov. 1946 returned to Belgrade. In 1947 he called on the Orthodox clergy to co-operate with the government, but, nevertheless, later refused to recognize the League of Serbian Priests, sponsored by the Communist party. In July 1948 he was present at the congress of the Orthodox Churches in Moscow, but refused to recognize the patriarch of Moscow and All-Russia as head of the Orthodox churches throughout the world.

Ghose, Aurobindo, Indian philosopher and poet (b. Koonagar, Western Bengal, Aug. 15, 1872—d. Pondicherry, French India, Dec. 5), was educated at St. Paul's school, London, and at King's college, Cambridge, where he read classics and modern languages. He subsequently taught English at the Baroda college. After 1906 he became an extreme nationalist propagandist and was a founder and the editor of the extremist *Bande Mataram*. After a period of imprisonment from Aug. 1907 on charges of sedition, he founded an *ashram* (abode of peace) in Pondicherry and as "Sri Aurobindo" became widely known as a metaphysician and humanist. He was chiefly known in the west for *The Life Divine*.

Gilpin, Sir Harry (Edmund Henry), British industrialist (b. Feb. 4, 1876—d. London, July 24), was chairman of the Liberal Party national executive from 1943 to 1946. He was a member of the Board of Trade's advisory council on export credits from 1931 and, in 1948 led a mission to Canada. He was knighted in 1949.

Giuliano, Salvatore, Sicilian bandit (b. Montelepre, Sicily, 1922?—d. Castelvetrano, Sicily, July 5). Having served in World War II with the Italian air force, after the capitulation of 1943 he engaged in the food black market. His claim to be the head of a Sicilian volunteer independence army was soon uncovered as a pretence, and his gunmen—at one time numbering as many as 500—were in fact well paid assassins. From rich landowners he and his men extorted more than £100,000 as ransom, and they were reputed to have killed 105 policemen and several civilians. In 1949 Mario Scelba, minister of the interior, formed a special police force to capture Giuliano dead or alive, but a conspiracy of silence surrounding the brigand made the task especially difficult. Eventually, far away from his cave hideout on Montelepre, he was ambushed and shot dead.

Glen, James Allison, Canadian politician (b. Renton, Dumbartonshire, Dec. 18, 1877—d. Ottawa, June 27), was Liberal Progressive M.P. for Marquette, 1926-30 and 1935-46, and was speaker of the Canadian House of Commons, May 1940-April 1945. He was minister of mines and resources, 1945-47.

Glentoran, Herbert Dixon, 1st Baron, of Ballyalloly, Co. Down (b. Strandtown, Belfast, Jan. 23, 1880—d. London, July 20), was Unionist member of the imperial parliament for the Pottinger division of Belfast, Dec 1918, and for East Belfast, 1922-39; he was also a member of the Northern Ireland parliament. From 1921 to 1942 he was chief whip of the Northern Ireland Unionist party and was minister of agriculture for Northern Ireland, 1941-43. He was made a peer in 1939.

Goldschmidt, Lazarus, Jewish orientalist (b. Plungiany, Lithuania, Dec. 17, 1871—d. London, April 18), had, at 21, already translated the book of Enoch from Ethiopic into Hebrew. His announcement in 1896 that he would undertake a complete German critical edition of the Babylonian Talmud was received with considerable scepticism, but the last of nine large volumes was completed in 1936, the whole being the first translation of the Talmud into a European language. He also translated both the Bible and the Koran into German.

Gollop, Mark, British rabbi (b. Russia, July 10, 1888—d. Bognor Regis, Sussex, Aug. 4), was senior Jewish chaplain to H.M. forces from 1926 to 1944 and was a *Dayan*, or judge, of the *Beth Din*, or Chief Rabbi's ecclesiastical court, from 1929.

Gomez y Arias, Miguel Mariano, Cuban politician (b. Sancti Spiritus, province of Santa Clara, Cuba, Oct. 6, 1889—d. Havana, Oct. 26), was the son of the second president of Cuba, José Miguel Gómez. He was a leader of the forces that ended the dictatorship of Gerardo Machado y Morales and from May to Dec. 1936 was himself president of the republic, but was overthrown by the military dictator, Col. Fulgencio Batista y Zaldivar.

Gould, Barbara Bodichon Ayrton, British politician (b. London—d. London, Oct. 15), was for a time secretary of the United Suffragist organization. She was publicity manager of the *Daily Herald*, 1919-1921. From 1930 she was on the Labour Party executive, being chairman, 1939-40, and was M.P. for Hendon North, 1945-50.

Graham-Little, Sir Ernest Gordon, British physician and politician (b. 1867—d. Epsom, Surrey, Oct. 6), was independent M.P. for the University of London from 1924 until the abolition of university seats in 1950. He was a well-known dermatologist and a recognized authority on the relationship between the medical profession and the state. He was a member of the university senate from 1906 and was knighted in 1931.

Grinius, Kazys, Lithuanian statesman (b. near Mariampole, Lithuania, Dec. 17, 1866—d. Chicago, U.S., June 4), graduated in medicine at the University of Moscow in 1893. After his return to Mariampole he worked for the Lithuanian movement and was constantly in trouble with the Tsarist police. He became prime minister from June 1920 to Feb. 1922. Deputy to the *Seimas* in 1922 and 1926, he led the Lithuanian Peasant party from 1924. Elected president of the republic on June 7, 1926, by a left-wing coalition, he was removed from this post on Dec. 19, 1926, by a Nationalist *coup d'état* and retired from active politics. In July 1944 he left Lithuania.

Gunn, Battiscombe George, British Egyptologist (b. London, June 30, 1883—d. Oxford, Feb. 27), spent the early part of his life in various capacities, including periods as secretary to the playwright Sir Arthur Pinero and as a journalist. His interests in archaeology, however, led him to assist Sir Flinders Petrie in the El-Haragh excavations, 1913-14, by copying inscriptions and preparing them for publication. This was followed by periods as assistant to Sir Alan Gardiner and Sir Leonard Woolley. Gunn was assistant keeper of the Cairo museum, 1928-31, and curator of the Egyptian section, Philadelphia university museum, 1931-34. He became professor of Egyptology in Oxford university in 1934. His published work included *Studies in Egyptian Syntax* (1924).

Gustaf V (OSCAR-GUSTAF-ADOLF), king of Sweden (b. Drottningholm castle, near Stockholm, June 16, 1858—d. Drottningholm, Oct. 29), was the son of King Oscar II and Queen Sophia-Wilhelmina of Nassau. On Sept. 20, 1881, he married Princess Victoria of Baded (1862-1930), great grand-daughter of Sophia, princess of Sweden; this marriage united the Bernadotte dynasty and the ancient Swedish royal house of Vasa. There were three sons, of whom the eldest was Crown Prince Gustaf Adolf (*q.v.*). Gustaf V succeeded his father on Dec. 8, 1907, and took as his motto "With the people for the Fatherland." During World War I he was a firm believer in

Scandinavian neutrality; in World War II his country was soon left as the one neutral in the north. On June 16, 1948, celebrations throughout the country marked the occasion of his 90th birthday. Until his illness in 1942, King Gustaf was a keen tennis player and traveller. He was proud, too, of his skill at needlework. Suffering from bronchitis, he was carried to the Riksdag on a stretcher when he opened the new parliamentary session on Jan. 11, 1949, but was able to walk to the throne supported by Crown Prince Gustaf Adolf. In March he left for France; his health was so much improved by a two months' stay on the French riviera that on July 10 he enjoyed a swim in the Kattegatt at Saeroe. He was 49 when he ascended the throne, yet his reign was the longest in Swedish history.

Gwynn, Stephen Lucius, Irish man of letters and politician (b. Co. Dublin, Feb. 13, 1864—d. Dublin, June 11), was classics master at Bradfield and elsewhere, 1887-96, and a journalist in London, 1896-1904. He was also, for some years, Irish correspondent to the *Observer*. In 1904 he returned to Ireland, and was Nationalist member for Galway City in the Westminster parliament 1906-18. He was a member of the Irish convention, 1917-18. Gwynn published a considerable number of histories, essays, guides and biographies, including lives of Swift, Goldsmith, Grattan, Scott and R. L. Stevenson. He was created an honorary D.Litt. of the National University of Ireland, 1940, and of Dublin university, 1945.

Gwynne, Howell Arthur, British journalist (b. Kilvey, Swansea, 1865—d. Little Easton, Essex, June 26), was, up to 1904, correspondent for *The Times* or for Reuter's agency, in a number of areas, including the Balkans, South Africa and the far east. He was foreign director of Reuter's in 1904 and editor of the *Standard*, 1904-11. In 1911 he succeeded Sir Fabian Ware as editor of the *Morning Post* and remained in that post until the paper ceased in 1937. He abhorred the sensational methods of popular journalism and, even when the *Post* had become a penny paper, resisted them to the end. Politically, Gwynne was an uncompromising Conservative; he played some part in the deposing of Lord Balfour from the party leadership, in the securing of the Unionist-Carsonite alliance and, later, in the overthrow of Lloyd George's coalition. He was created C.H. in 1938.

Hacking, Douglas Hewitt Hacking, 1st Baron, of Chorley in the County Palatine of Lancaster (b. Clayton-le-Moors, Lancashire, Aug. 4, 1884—d. Cranleigh, Surrey?, July 29), was Unionist M.P. for the Chorley division of Lancashire, Dec. 1918-June 1945, and held positions as parliamentary private secretary, under secretary of state, or financial secretary, in various ministries from 1920 to 1929 and from 1933 to 1936. He was government delegate to the League of Nations in 1933. From 1936 to 1942 Hacking was chairman of the Conservative party. He founded the Travel association in 1928. He was sworn of the Privy Council in 1929 and created a peer in 1945.

Hailsham, Douglas McGarel Hogg, 1st Viscount, of Hailsham, Sussex, British lawyer and politician (b. London, Feb. 28, 1872—d. Hailsham, Aug. 16), son of Quintin Hogg, founder of the Regent street Polytechnic, was educated at Eton and for eight years was with the family firm of West India merchants, studying sugar production in the West Indies and British Guiana. Although at first rejected because of defective sight, he served in the South African War. Before this he had already abandoned commerce for law, and was called to the bar in 1902; in the next 15 years, largely through his work in the commercial court, he built up one of the largest junior practices of his day. An exception to the lord chancellor's ruling that no K.C. should be created while hostilities lasted, Hogg was given silk in 1917. He was made attorney general by Bonar Law in 1922, was returned unopposed as Conservative M.P. for St. Marylebone and was knighted and sworn of the Privy Council in the same year. He continued as attorney general under Stanley Baldwin until 1928, except for the nine months in 1924 when the Labour party was in office; when he resumed his place after this interval, Baldwin included him in the cabinet. He was appointed lord chancellor in 1928 and became the 1st Baron Hailsham, being advanced to a viscounty in the following year. Hailsham led the opposition in the Lords during the second Labour government, 1930-31, and on the formation of the first National administration in the latter year, returned to office as secretary for war, becoming government leader in the upper house. On the resignation of Lord Sankey as lord chancellor in 1935, Hailsham returned to that office; but ill health during this period forced him to undertake less onerous duties, and in May 1938 he became lord president of the council, but resigned in the following November. Hailsham was the editor of the *Hailsham edition of Halsbury's Laws of England*.

Hannay, James Owen, British novelist (as " GEORGE A. BIRMINGHAM ") and Anglican priest (b. Belfast, July 16, 1865—d. London, Feb. 1), was educated at Haileybury and Trinity college, Dublin. He was rector of Westport, County Mayo, from 1892 to 1913, and became Donellan lecturer in theology at Trinity college, Dublin, 1901-2, a member of the General Synod of the Church of Ireland, 1905-15, and a canon of St. Patrick's cathedral, Dublin, 1912-21. After a chaplaincy abroad, he was rector of Mells, Somerset, 1924-34, and vicar of Holy Trinity, Kensington Gore, London, from 1934. He wrote a number of theological works, but was best known for his many popular novels and several plays.

Hardie, William George, Anglican archbishop (b. Sydney, N.S.W., Aug. 20, 1878—d. Boscombe, Hampshire, Feb. 21), went to Jamaica as assistant bishop in 1928, became bishop, 1931, and was archbishop of the West Indies, 1945-49.

Harmer, Sir Sidney Frederick, British zoologist and museum director (b. Norwich, March 9, 1862—d. Cambridge, Oct. 22), was educated at University college, London, of which he became a fellow in 1884, and King's college, Cambridge, under F. M. Balfour; he later became a fellow of King's and, from 1922, an honorary fellow. During his fellowship he was a university lecturer in zoology and director of the zoology museum. Joining the staff of the British Museum (Natural History) in 1908, he was director of the museum, 1919-27. He published many scientific papers, including essays on such extremes in the matter of size as the *polyzoa* and the whales; he was joint editor of the *Cambridge Natural History* and a contributor to *Encyclopædia Britannica*. Harmer was knighted in 1920.

Harwood, Sir Henry Harwood, British admiral (b. Jan. 19, 1888—d. Goring-on-Thames, Oxfordshire, June 9), joined the Royal Navy as a cadet in 1903. In Sept. 1936 he became commodore commanding, South American division, with H.M.S. " Exeter " as his flagship. As a rear admiral he commanded H.M. ships " Exeter," " Ajax " and " Achilles " in their successful action against the German pocket battleship " Admiral Graf Spee " off the mouth of the River Plate, Dec. 1939. He was created K.C.B. immediately after the action. He was commander in chief, Mediterranean, 1942.

Haworth, Sir (Walter) Norman, British chemist (b. Chorley, Lancashire, March 19, 1883—d. Barnt Green, Worcestershire, March 18), after holding posts at Imperial college, London, and in St. Andrew's university, became professor of chemistry at King's college, Newcastle (Durham university), in 1920. From 1925 to 1948 he was professor in Birmingham university, of which he was vice principal in 1947-48. Haworth shared the Nobel prize in 1937 for his work on vitamin C. He was also associated with the development of atomic energy, and was one of the signatories of the memorandum on the control of atomic energy submitted to the U.N. commission. He was knighted in 1947.

Henderson of Ardwick, Joseph Henderson, 1st Baron, British politician (b. Carlisle, 1885—d. Carlisle, Feb. 25), was president of the National Union of Railwaymen 1933-1936, and first Labour mayor of Carlisle, 1927-28. He was a member of the Labour Party executive and M.P., Ardwick, Manchester, in 1931 and from 1935 until created a baron in Jan. 1950. He was appointed a lord of the Treasury in 1945.

Hichens, Robert Smythe, British novelist (b. Speldhurst, Kent, Nov. 14, 1864—d. Zürich, Switzerland, July 20), attracted considerable attention with his book *The Green Carnation* (1894), a skit on Oscar Wilde and Lord Alfred Douglas. His best known work was *The Garden of Allah* (1904), which was later filmed, as were *The Paradine Case* (1933) and other books. In all, he wrote about 60 novels and collaborated in, or wrote, a number of plays.

Hodgson, (John) Stuart, British journalist (b. Rochdale, Lancashire, 1877—d. Beckenham, Kent, May 10), was a prolific leader writer both before and after his period as editor of the *Daily News* from 1921 to 1931. His books included *The Man who made the Peace* (1939), a study of Neville Chamberlain, and *Lord Halifax, a Study* (1941).

Holmes, Albert John, English amateur cricketer (b. Thornton Heath, Essex, June 30, 1899—d. Heathfield, Sussex, May 21), first played for Sussex in 1932 and was captain from 1936 to 1939. He was manager of the English touring team in South Africa, 1938-39, and was made a member of the test match selection committee in 1939, becoming its chairman in 1946.

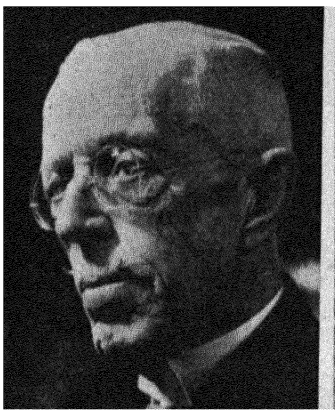
Huddleston, Sir Hubert Jervoise, British major general (b. 1880—d. London, Oct. 2), served in the South African War, 1899-1902, in Nigeria, 1903-8, and with the Egyptian army in the Sudan, in campaigns against the *meks* (petty " kings " of southern Kordofan) and, in 1916, against the sultan of Darfur, who had sided with the Turks. After service under General Allenby as a brigade commander, and in Iraq and Persia, he returned to Egypt to direct the suppression of the 1922 disturbances, later becoming chief of staff, Egyptian army. After the assassination of Sir Lee Stack, *sirdar* (c. in c.) of the Egyptian army and governor general of the Sudan, Huddleston became *sirdar* and directed the evacuation of Egyptian troops from the Sudan under the terms of Allenby's ultimatum. In 1925 he became first commander of the separated Sudan defence force. From 1930 to 1938 he commanded a British brigade and two Indian military districts, before retiring to the lieutenant governorship of the Royal hospital, Chelsea, London, in 1938. Recalled in 1940 as G.O.C., Northern Ireland district, he returned to the Sudan later in the same year as governor general, holding the post until 1947. In that year he was created a G.C.M.G., having become a K.C.M.G. in 1940.

Hunkin, Joseph Wellington, Anglican bishop (b. Truro, Cornwall, Sept. 25, 1887—d. Truro, Oct. 28), became a fellow of Gonville and Caius college, Cambridge, in 1913, and vice principal, Wycliffe hall, Oxford, in 1914. He was awarded the M.C. for service in World War I, and in 1919 returned to Cambridge as dean of Caius. He was chaplain to the King, 1926-35, and was consecrated bishop of Truro in the latter year. Bishop Hunkin was well-known as a modernist who advocated interdenominational co-operation and re-statement of the creeds in the light of modern thought.

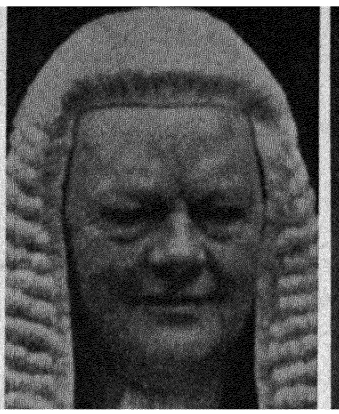
Hurd, Sir Percy Angier, British politician and journalist (b. Somerset, 1864—d. London, June 5), was editor of the *Canadian Gazette* and correspondent of the *Montreal Gazette* and other journals before World War I. His interest in Empire unity led, in 1898, to his appointment as first editor and managing director of the *Outlook*, a post which he held until 1904; his output of books and articles on this subject was considerable. Hurd served as secretary of the Tariff commission, and was Unionist M.P. for Frome, 1918-23, and Conservative M.P. for Devizes, 1924-45. He was knighted in 1932.

Hutchinson, Walter Victor, British publisher (b. Highgate, London, May 16, 1887—d. Winchester, April 30), was head of some 80 allied publishing, printing and other concerns. In Hutchinson house, the former Derby house, which he bought in 1946, he placed his collection of sporting pictures to found, in 1949, the " National Gallery of British Sports and Pastimes."

Hutchison of Montrose, Robert Hutchison, 1st Baron, of Kirkcaldy, Fife, British peer (b. Sept. 5, 1873—d. Kirkcaldy, Fife, June 13), served in South Africa, 1900-2, and in World War I, and was created K.C.M.G. in 1919. He retired from the army as a major general in 1923. He was National Liberal M.P. for Kirkcaldy burghs, 1922-23,



King Gustaf V of Sweden



Viscount Hailsham



William L. Mackenzie King



Sir Harry Lauder

Liberal M.P. for Montrose, 1924-31, and Liberal National M.P. for the same constituency, 1931-32. He was chief Liberal whip, 1926-30, and paymaster general, 1935-38. He helped to form the Liberal National organization, of which he was chairman. He was created a baron in 1932.

Indjeian, Matheos, archbishop of the Armenian Apostolic church (b. Istanbul, 1877? d. Manchester, July 26), abandoned a legal career to enter the Armenian church, soon becoming bishop of Smyrna. During World War I his influence upon the Turkish governor of that town saved the Armenian community there from deportation. He came to Manchester in 1931 as archbishop of the Armenian church in Great Britain. He had formerly been archbishop in Paris.

Ingram, Rex (REX HITCHCOCK), Irish-born U.S. film producer and director (b. Dublin, 1892—d. Hollywood, California, July 21), entered the film industry as an actor for the Vitagraph company. As a director, his best-known films included *The Four Horsemen of the Apocalypse* (1921). *Scaramouche* (from the novel by Rafael Sabatini [d. Feb. 13]), a version of the *Prisoner of Zenda* and *The Garden of Allah* (from the book by Robert Hichens [d. July 20]). He brought to the screen such well known actors as Rudolph Valentino and Ramon Novarro.

Jannings, Emil, Swiss-born German actor (b. Rorschach, Switzerland, July 23, 1884—d. St. Wolfgang, near Salzburg, Austria, Jan. 2). While he was still a child, his parents moved to Görlitz, Germany, where he began his stage career. After working in Bremen and Leipzig he joined, in 1913, the Deutches Theater, Berlin, then directed by Max Reinhardt, under whose influence he developed into an outstanding actor. But it was through the medium of the cinema that he achieved world fame. He made his first film, directed by Ernst Lubitsch, in 1914, and in the successes that followed—films like *The Last Laugh* and *Vaudeville*—he perfected the role which became peculiarly his own, that of a strong, simple figure brought down by fate and his own blind guilelessness. *Vaudeville* gave him a reputation outside Germany, and in 1925 he re-joined Lubitsch, then producing in Hollywood. Although the material given to him there was often poor, he won a well-deserved "Oscar" in 1929; but, not liking talking pictures, he went back to Germany and took up farming. In 1930, however, he returned to the Deutches Theater, and later resumed his connection with the film industry, making in 1932 his first talking film and greatest success, *The Blue Angel*, with Marlene Dietrich. From 1933, Jannings' gifts were largely used for German propaganda purposes and during World War II he played in *Oom Kruger*, an anti-British film about the South African War. Acquitted by a de-nazification court after the war, he became an Austrian citizen in 1947. He was married three times.

Jaques-Dalcroze, Emile, Swiss physical educationist and composer (b. Vienna, July 6, 1865—d. Geneva, July 2), was the inventor of the training system known as eurhythmics, in which music is linked with physical movement. His compositions included orchestral suites, violin concertos and string quartets.

Jensen, Johannes Vilhelm, Danish writer (b. Himmerland, North Jutland, Jan. 20, 1873—d. Copenhagen, Nov. 25), abandoned his medical studies to take up writing, going to Spain in 1898 as correspondent of the Danish paper *Politiken*. In the same year he began to attract notice with the first of his *Himmerland Stories*, tales of his childhood home, the writing of which went on intermittently until 1926. In 1901 he published *The Fall of the King*, about King Christian II, regarded as one of the finest Danish historical novels. After travelling in the far east and America he published a collection of *Exotic Short Stories*. These and others of his stories revealed an affinity with Rudyard Kipling whom he admired greatly and on whom he wrote a monograph. His *Madam d'Ora*, *The Wheel* (1904-5) and *The Temptations of Dr. Renault* (1935) were all based on the Faust theme. His greatest work as a novelist was *The Long Journey* (1908-22), consisting of six separate novels. As a poet, Jensen was influenced by Heine and Walt Whitman and was considered one of the greatest of his country and age. In 1944 he received the Nobel prize.

Jessel, Herbert Morton Jessel, 1st Baron, of Westminster, British politician (b. Brighton, Sussex, Oct. 27, 1866—d. London, Nov. 1), served with the army in India, 1887-90, and in World War I was commandant of the Army Remount service and deputy director of remounts, War Office. He was Unionist M.P. for St. Pancras South, 1896-1906 and 1910-18, and was created a baron in 1924. In 1900 he became a member of the first Westminster City council, subsequently serving on the council until 1948; he was mayor of Westminster, 1902-3, and an alderman from 1909.

Johnston, Cyril Frederick, British bell founder (b. Croydon, Surrey, May 9, 1884—d. London, March 30), was a member of the firm of Gillett and Johnston, Croydon, for over 40 years and in 1948 was appointed O.B.E. for his work in the development of bell founding and scientific tuning. He was closely associated with the making and tuning of about 50 carillons all over the world and many ringing bells, including the peal at Wimborne Minster, Dorset, and the carillons of Chicago university chapel and the houses of parliament at Ottawa. He was master of the Clockmakers company, 1944 and 1945, and was a liveryman of the Musicians company.

Jollie, Ethel Maude Tawse, Southern Rhodesian politician (b. Stafford, March 8, 1874—d. Salisbury, Southern Rhodesia, Sept. 21), travelled extensively before settling in Rhodesia in 1915. She was elected to the legislative assembly in 1920, and became secretary of the Responsible Government association. She sat in the first Southern Rhodesian parliament, 1923-27, being the first woman M.P. in the empire.

Jolson, Al (ASA YOELSON), U.S. entertainer (b. St. Petersburg, Russia May 26, 1886—d. San Francisco, Oct. 23), the son of a Jewish cantor, made his first appearance as a stage singer in Washington. Later he joined a black-face minstrel company, where he was seen and engaged by the impresario J. J. Shubert; under Shubert, and mainly at the New York Winter Garden, he became by 1921 the most famous American artist in his field. The film *The Jazz Singer*, 1927, in which he appeared, is regarded as the first important talking picture. In 1928 he was the star of the film *The Singing Fool;* in this he sang "Sonny Boy," a song which became phenomenally popular. Other songs which he popularized included "April Showers" and "Mammy." Jolson sank into comparative obscurity during the 1930s but returned to popularity as an entertainer of troops in World War II. His autobiographical film *The Jolson Story*, 1946, in which Jolson, unseen, sang the songs and Larry Parks played the part of Jolson, brought him to the top of the entertainment world for a third time. In 1950 he entertained U.N. troops in Korea.

Jones, Sir Henry Haydn, British politician (b. Ruthin, Denbigh, Dec. 27, 1863—d. Towyn, Merioneth, July 2), was Liberal M.P. for Merioneth from 1910 to 1945. He was knighted in 1937.

Kilbracken, Hugh John Godley, 2nd Baron, of Killegar, Co. Leitrim, British lawyer (b. June 12, 1877—d. Tenterden, Kent, Oct. 13), entered the Parliamentary Council office in 1906 and, among other statutes, was responsible for drafting the Government of India act, 1919 (the Montagu act). From 1922 to 1944 he was counsel to the lord chairman of committees (House of Lords). He had succeeded to the barony in 1909.

King, William Lyon Mackenzie, Canadian statesman (b. Berlin [now Kitchener], Ontario, Dec. 17, 1874—d. Kingsmere, near Ottawa, July 22), was educated at Toronto university, and later held a fellowship in political economy at Chicago university and one in political science at Harvard with which he visited Europe in 1899. He was editor of *Labour Gazette*, 1900-8, later combining with this post that of deputy minister of labour of Canada. In Sept. 1908, Mackenzie King resigned his civil service post to enter politics and was elected Liberal M.P. for North Waterloo, a seat which he held until 1911. (He was later M.P. for various other Canadian constituencies continuously from 1919 to 1949). During his first period in parliament he was a member of Sir Wilfrid Laurier's cabinet as minister of labour. In 1911, however, the Liberals were defeated in the "reciprocity election" and Mackenzie King became head of the Liberal party information service. In 1914 he went to the United States for four years as director of industrial research of the Rockefeller foundation. The results of his work with the foundation were embodied in *Industry and Humanity* (1918, re-issued 1935 and 1947). He was elected leader of the Liberal party in 1919, on the death of Laurier, and was leader of the opposition until 1921, when the collapse of the Union government put the Liberals back into office, although without a clear majority. From that year until 1930 (except for a short interval of Conservative government in the summer of 1926) and from 1935 to 1948 he was prime minister and president of the Canadian Privy Council. He also held the portfolio

of external affairs from 1935 to 1946 during which period he was responsible for greatly increasing Canada's diplomatic representation abroad. He was a member of the United Kingdom Privy Council from 1922. In 1939, Mackenzie King acted as minister in attendance during the visit of King George VI and Queen Elizabeth and in 1947 received the Order of Merit in recognition of his long and distinguished service. Although emphasizing Canadian national unity, he constantly stressed the need for close association between the free nations of the Commonwealth and pursued a policy of collaboration with the U.S. He retired from public life in 1948 because of ill health and latterly worked upon his memoirs, assisted by an expert staff at McGill university working by means of a grant from the Rockefeller foundation.

Kingston, George Frederick, Anglican archbishop (b. Prescott, Ontario, 1889—d. Halifax, Nova Scotia, November), was professor of philosophy, University of King's College, Halifax, 1920-22, and of moral philosophy, University of Trinity College, Toronto, 1922-40. He was bishop of Algoma, 1940-44, and of Nova Scotia from 1944, becoming archbishop of that see and primate of Canada in 1947.

Kirkpatrick, Sir George Macaulay, British general (b. Aug. 23, 1866—d. London, Feb. 6), served in South Africa from 1899 to 1902. After a period in India under Lord Kitchener, 1906-10, he became inspector general of the Australian military forces in 1910. Kirkpatrick served again in India, from 1914 to 1920, as director of military operations and chief of the general staff. He commanded the British forces in China, 1920-21, and Western command, India, 1923-27. He was colonel commandant of the Royal Engineers from 1927 to 1939. He was created K.C.S.I. in 1917 and K.C.B. in 1918.

Kolarov, Vasil, Bulgarian politician (b. Shumen, Bulgaria, July 16, 1877—d. Sofia, Jan. 23), a teacher by profession, joined the Bulgarian Social Democratic party and six years later was one of the organizers of its "narrow" or revolutionary wing. In 1913 he was elected deputy to the Bulgarian Sobranye, and again in 1920. When in 1919 the "narrow" Social Democrats re-organized themselves as the Bulgarian Workers' (Communist) party, he became its secretary general. He attended all the Comintern congresses from 1920, two years later was elected a member of the executive committee and in 1926 became secretary general. In Sept. 1923 he was sent by the Kremlin to Bulgaria to organize with Gheorghi Dimitrov an uprising which, however, failed; escaping to Moscow, he remained there for more than two decades, becoming a Soviet citizen. He returned to Bulgaria in Sept. 1945. He was a member of both Sobranyes elected in Nov. 1945 and Oct. 1946. As provisional president of the republic (Sept. 1946-Dec. 1947), in Nov. 1946 he appointed Dimitrov prime minister, and in Dec. 1947 assumed the duties of minister of foreign affairs in the second Dimitrov cabinet. When Dimitrov died on July 2, 1949, Kolarov was neither among the few prominent Communists who went to Moscow to bring the body back to Sofia nor did he attend the burial ceremonies in the Bulgarian capital. On July 20 the Sobranye unanimously elected him prime minister and foreign minister but he was not present. On Aug. 6 the cabinet was reconstituted and V. Poptomov succeeded him as foreign minister.

Krupp von Bohlen und Halbach, Gustav, German armaments industrialist (b. The Hague, Aug. 7, 1870—d. Austria, Jan. 16), resigned from the German diplomatic service to join the Krupp combine. After his marriage with Friedrich Alfred Krupp's daughter, Berta, in 1906, he legally adopted the name Krupp, and later became head of the combine. He gave strong support to the nazi regime, and after World War II was indicted for trial at Nuremberg but found unfit to plead; in his last years he was paralyzed and partly blind.

Kuwait, Sir Ahmad Al-Jabir As-Subah, Sheikh of, (b. Kuwait, 1885—d. Kuwait, Jan. 29), acceded to this Persian gulf sheikhdom in March 1921. Large oil deposits were found there during his reign.

Kyrou, Achilles, Greek journalist (b. Athens, 1890?—d. Paris, Oct. 13). He was proprietor and editor of the independent Conservative Athens newspaper, *Estia*. Besides his activities as a political commentator for 35 years, he was a prolific writer on historical and literary subjects, among his best-known works being a life of El Greco. His body was brought back to Athens for a state funeral.

Laidlaw, Daniel, Scottish piper (b. Little Swinton, Berwick July 26, 1875—d. Shoresdean, Berwick, June 2). After an exemplary period of service in the Durham Light Infantry and the King's Own Scottish Borderers, 1896-1912, re-enlisted in the latter in Sept. 1914. It was Piper Laidlaw who, before an assault on the German lines near Loos, on Sept. 25, 1915, rallied his company, shaken by the effects of gas, by calmly mounting the parapet under fire and playing them out of the trench with "Blue Bonnets over the Border"; later, though wounded, he hobbled along with his comrades, piping "The Standard on the Braes o' Mar" until his injuries forced him to retire. The exploit won him the Victoria Cross and Croix de Guerre with palms.

Lamont, Daniel, Scottish pastor and theologian (b. Port Bannatyne, Bute, 1869—d. Edinburgh, May 4), began a distinguished career as a mathematician at Glasgow university, but abandoned this to join the ministry of the United Free Church of Scotland. In 1927, he was appointed to the chair of practical theology at New college, Edinburgh, and from 1939 occupied the corresponding chair in Edinburgh university; he retired in 1945. He was moderator of the general assembly of the Church of Scotland in 1936.

Laski, Harold Joseph, British political scientist (b. Manchester, June 30, 1893—d. London, March 24), was educated at Manchester Grammar school and at New college, Oxford. He was a lecturer in history at McGill university, Canada, 1914-16, and at Harvard university, 1916-20. In 1920 he joined the staff of the London School of Economics, at which he held the London university professorship of political science from 1926. In 1934 he visited Russia and lectured in Moscow on parliamentary government, which he strongly upheld. Laski was a member of the Fabian society executive, 1922-36, of the Labour party executive, 1936-49, and was party chairman, 1945-46. In July 1946 he headed a goodwill mission to Moscow and had an interview with Stalin. Later in the same year he brought an unsuccessful libel action against a provincial newspaper for misrepresenting his views on revolution by violence in a report in 1945 of an election speech by him. Among his early writings were *The Problem of Sovereignty* (1917) and *Authority in the Modern State* (1919). In 1925 he published *A Grammar of Politics*, a complete statement of Socialist theory, and, in 1927, a small book on Communism. His later works included *Parliamentary Government in England* (1938), *Reflections on the Revolution of Our Time* (1943) and *Faith, Reason and Civilization* (1944), the latter two books re-affirming his faith in the development of Soviet Russia and the hope for the future of Great Britain in a planned society.

Lauder, Sir Harry (HENRY MACLENNAN LAUDER), Scottish comedian and singer (b. Portobello, Edinburgh, Aug. 4, 1870—d. near Strathaven, Lanarkshire, Feb. 26), began his career as an amateur singer while working in a mill and as a collier, before starting concert-party work professionally in 1896. He first appeared in London in 1900, as a stand-in at Gatti's music hall. The spontaneity and cheerful humour of his singing won him immediate success and he later made 22 tours in North America, 7 in Australasia and 2 world tours. For his services as an entertainer in World War I he was knighted in 1919. In World War II he again entertained servicemen and gave also several broadcasts. Lauder wrote all his own lyrics and music; celebrated among many were "I Love a Lassie," "Stop yer tickling, Jock," "Roamin' in the Gloamin'" and "It's nice to get up in the morning." He also wrote a comedy and his memoirs.

Lazarus-Barlow, Walter Sydney, British pathologist and cancer research worker (b. 1865—d. Bexhill, Sussex, Jan. 15), was director of the cancer research laboratories of the Middlesex hospital, London, and became in 1920, London university professor of experimental pathology at the medical school of that hospital. Among his published works were a translation, in 1892-93, of Samuel Pozzi's *Treatise on Gynaecology*, and general works on pathology and histology. He wrote the article on cancer research in *Encyclopædia Britannica*, of which he was also departmental editor, medical sciences. In 1909 he gave the Croonian lectures before the Royal College of Physicians on "Radio-activity and Carcinoma."

Lebrun, Albert-François, French statesman (b. Mercy-le-Haut, Meurthe-et-Moselle, France, Aug. 29, 1871—d. Paris, March 6), the son of a small landowner in Lorraine, passed out top both from the Ecole Polytechnique and later the Ecole des Mines and followed at first the profession of a mining engineer. When only 27, however, he entered regional politics and in 1905 became chairman of his departmental Conseil Général, retaining this office until becoming head of the state in 1932. Meanwhile, in 1900, he had become a deputy of Meurthe-et-Moselle, and was re-elected until 1919. He was minister of colonies, 1911-13; of war, 1913; and again of colonies, 1913-14. In the latter part of World War I he was minister of blockade and of liberated regions. He was made senator in 1920, and was appointed by Raymond Poincaré head of the Caisse d'Amortissement (roughly equivalent to the British National Debt commission), 1926-31. He was vice-president of the Senate, 1925-29, and president, 1931-32. On May 10, 1932, the National Assembly elected him president of the republic by 633 out of 777 votes cast. In March 1939 President Lebrun and his wife (d. 1947) paid a state visit to Great Britain. He was re-elected president of the republic for seven years on April 15, 1939, receiving 506 of the 904 votes cast. On July 10, 1940, at Vichy, the National Assembly by 569 votes to 80, with 18 abstentions, accorded full powers to Marshal Philippe Pétain who on the following day, by a sort of *coup d'état*, proclaimed himself chief of the French state. Without resigning formally, and without protest, Lebrun on July 15 retired to Vizille, near Grenoble. In 1943 he was interned by the Germans at Itter, Tirol, but was released by them the following year.

Lewis, Vernon Arthur, Southern Rhodesian judge (b. Capetown, South Africa, March 24, 1886—d. Salisbury, Southern Rhodesia, May 22). He was elected to the Rhodesian parliament in 1934, being at once appointed minister of justice, defence and internal affairs. He assumed office as chief justice on May 15, 1950.

Lewis, Sir Wilfred Hubert Poyer, British judge (b. 1881—d. London, March 15), was called to the bar in 1908 and was chancellor of the dioceses of Llandaff, Monmouth, Manchester, Blackburn and Worcester. He became junior counsel (common law) to the Treasury in 1930 and a justice of the King's Bench division in 1935. In 1946 he was appointed chairman of the committee on courts-martial.

Lewis, Sir Willmott Harsant, British journalist (b. Cardiff, June 18, 1877—d. Washington, D.C., Jan. 4), after employment on a Brighton newspaper and a period on the stage, joined the *North China Star*. He was in the far east during the time of the Boxer rebellion, the announcement of the Anglo-Japanese alliance, and the Russo-Japanese war, 1904-5, during which he was a correspondent of the *New York Herald*. After some years as editor of the *Manila Times*, and service on the Paris staff of the U.S. Committee of Public Information, 1917-19, he joined *The Times* staff, and was Washington correspondent from 1920 to 1948. He was created K.B.E. in 1931.

Liddell, Sir Frederick Francis, British lawyer (b. June 7, 1865—d. Sandy, Bedfordshire, March 19), was called to the Bar in 1894 and entered the parliamentary counsel's office in 1895. He was first parliamentary counsel, 1917-28, and counsel to the speaker, 1928-43. His powers of legislative draftsmanship were shown in such work as his adaptation of the format of the Army act to make the Air Force act of 1917 and his planning of the transitional Orders in Council consequent upon the Government of Ireland act. Liddell was made a K.C.B. in 1916 and took silk in 1929.

Lindley, Sir Francis Oswald, British diplomat (b. June 12, 1872—d. Alresford, Hampshire, Aug. 17), was educated at Winchester and Magdalen college, Oxford. Joining the diplomatic service in 1899, he served in Vienna, Tehran, Cairo, Tokyo, Sofia and Christiana before going to Petrograd as counsellor in 1915. He was in Russia until 1919, as H.M. commissioner and as consul general, and in a difficult period won the respect of the Bolshevists. Lindley was withdrawn when Allied intervention was decided upon in 1919, and was transferred to Vienna, first as high commissioner then as minister. He served in Athens, 1922-23, but asked for his passports in protest against the execution, by the revolutionary authorities, of Gounaris and other ministers held responsible for the Greek defeat in Anatolia. He then went to Oslo, 1923-29, was ambassador in Lisbon, 1929-31, and in Tokyo, 1931-34. During this period the Japanese were already at war in Manchuria and Lindley's appreciation of the situation, as embodied in his dispatches, was of great value to the British government. He was created K.C.M.G. in 1926 and a G.C.M.G. in 1931. He published *A Diplomat off Duty* (1928) and a biography of the 14th Lord Lovat (1935).

Livingstone, Sir Alexander Mackenzie, British politician (b. Applecross, Ross-shire?, Oct. 18, 1880—d. London, Sept. 24), was Liberal M.P. for the Western Isles division of Inverness-shire, 1923-29. In the 1924 parliament he was whip of the Radical Parliamentary group of Liberals formed in opposition to Lloyd George. In 1930 he joined the Labour party.

Lynam, Edward William O'Flaherty, British cartographical historian (b. London, April 18, 1885—d. London, Jan. 29), became, in 1931, superintendent of the British Museum map room, which he substantially re-organized. He was responsible for "Maps of the Fenland" in the *Victoria County History of Huntingdonshire;* an introduction to *Christopher Saxton's Atlas of England and Wales, 1579; British Maps and Map Makers (1944)* and other cartographical essays. Lynam was also an authority on Scandinavian and Irish history, and was elected a member of the Royal Irish academy in 1926. From 1945-49 he was president of the Hakluyt society.

McDonald, Andrew Joseph, Roman Catholic archbishop (b. 1871—d. Edinburgh, May 22), was appointed sub-prior of Fort Augustus abbey in 1899, and was abbot there, 1919-29. He was consecrated fifth archbishop of St. Andrews and Edinburgh in 1929.

McKinlay, Adam Storey, British politician, (b. Govan, Glasgow, 1886?—d. Glasgow, March 17), was Labour M.P. for the Partick division of Glasgow, 1929-31, for the county of Dumbarton, 1941-45, and for West Dumbarton from 1945.

Mann, Heinrich, German novelist (b. Lübeck, March 27, 1871—d. Santa Monica, California, U.S., March 12). The elder brother of Thomas Mann, he studied at the Lübeck Gymnasium and the University of Berlin; from 1894 he lived at Florence and later at Munich. A writer in a realistic and satirical vein, he inclined politically to the left and was an admirer of French rationalism. After 1933 he took refuge in Czechoslovakia, in 1938 moved to France and in 1940 went to the United States. On Oct. 19, 1949, he wrote to Wilhelm Pieck declaring his solidarity with the Eastern German republic. Foremost among his novels were *Die Göttinnen* (1902-3), *Die kleine Stadt* (1908), *Der Untertan* (1911) and *Der Kopf* (1925).

Martin, Frederick, British politician (b. Peterhead, Aberdeenshire, Oct. 23, 1882—d. Mintlaw, Aberdeenshire, Jan. 18), was Liberal M.P. for East Aberdeenshire from 1922 to 1924. In spite of blindness resulting from his service in World War I, he played an active part in the public life of Aberdeenshire, and was created C.B.E. in 1942.

Masters, Edgar Lee, U.S. poet, novelist and biographer (b. Garnett, Kansas, Aug. 23, 1869—d. Pennsylvania, March 5), published his first volume, *A Book of Verses*, in 1898. He later developed a lucrative law practice in Chicago, but continued to write poetry and political essays. In 1915 he published the verses of *Spoon River Anthology*, of which 70 editions were sold by 1940. His later works included *Songs and Satires, The Great Valley, Toward the Gulf, The Domesday Book, The New Spoon River* and several novels. His biographies included *Lincoln the Man*, which was criticized on the grounds that it presented Lincoln in an uncomplimentary light, a work on Walt Whitman and one on Mark Twain, besides his autobiography.

Maurice, Henry Gascoyen, British zoologist (b. May 24, 1874—d. London, May 12), was in charge of the fisheries department, Ministry of Agriculture and Fisheries, 1912-38. He was also secretary of the Society for the Preservation of the Fauna of the Empire, president of the International Council for the Exploration of the Sea, 1920-38, and president of the Zoological Society of London, 1942-48.

Meninsky, Bernard, British painter (b. Russia, July 25, 1891—d. London, Feb. 12), exhibited at New English Art club, London Group and many international exhibitions, and is represented at the Tate gallery and in the galleries of Adelaide, Melbourne, Minnesota and elsewhere. His work as an official war artist, 1914-18, is exhibited at the Imperial War museum. He published a book of *Drawings of Mother and Child* (1920) and illustrated an edition of Milton, 1947.

Michaëlis, Karin, Danish authoress (b. Randers, Denmark, March 20, 1872—d. Copenhagen, Jan. 11), was well known for her novels, short stories and children's books, especially for the best-selling *Den farlige Alder* (*The Dangerous Age*), 1911, which was translated into 20 languages. She lectured extensively in the U.S., where she lived during World War II and was active in the Free Danish movement.

Mildmay of Flete, Anthony Bingham Mildmay, 2nd Baron, of Totnes, Devon, British amateur steeplechase rider (b. April 14, 1909—d. [drowned off Mothecombe beach, S. Devon] May 12) had over 100 winners to his credit, although he never succeeded in winning the Grand National, being deprived of possible victory on two occasions, 1936 and 1948, by mishaps. He served on the National Hunt committee and was a member of the Jockey club. He succeeded to the barony in 1922.

Mill, Hugh Robert, British meteorologist and geographer (b. Thurso, Caithness, May 28, 1861—d. East Grinstead, Sussex, April 5), was honorary secretary of the Royal Meteorological society, 1902-6, and its president, 1907-8. He was director of the British Rainfall organization, and editor of *British Rainfall* and *Symon's Meteorological Magazine*, 1901-19. His work included the collection of rainfall records from 1677. Mill was also an expert on polar conditions and was consulted by such eminent explorers as Nansen, Amundsen, Scott, Byrd and Shackleton. His writing included *The Siege of the South Pole*, 1905, and *The Life of Sir Ernest Shackleton*, 1923. He was editor of the 1911 edition of *International Geography*, and contributed the article on geography to *Encyclopædia Britannica*.

Millay, Edna St. Vincent, U.S. poet (b. Rockland, Maine, Feb. 22, 1892—d. near Austerlitz, New York, Oct. 19), wrote poetry while still a girl; her first long poem, "Renascence," appeared in *The Lyric Year* in 1912. She later attracted attention because of her feminist and radical views; she became associated with notable American Communist, feminist and pacifist leaders. In 1922 she won the Pulitzer prize for *The Harp Weaver*. Her considerable output of lyric verse included *Second April* (1921), *Wine from these Grapes* (1934) and *Huntsman, What Quarry?* (1939). She also wrote a number of plays and the book for an opera, *The King's Henchman*, composed by Deems Taylor. Edna Millay was among the leading woman poets of her half-century.

Milne, (Edward) Arthur, British mathematician (b. Hull, Feb. 14, 1896—d. Dublin, Sept. 21), was a fellow of Trinity college, Cambridge, 1919-25. He was Beyer professor of applied mathematics, Manchester university, 1924-28, before his appointment to the Rouse Ball chair of mathematics and to a fellowship at Wadham college, Oxford, in 1929. Milne's earlier work was in mathematical astrophysics, for which he was awarded the Royal Astronomical society's gold medal in 1935. From 1932 he also worked on the problem of the "expanding universe" and in *Relativity, Gravitation and World-Structure* (1935) proposed an alternative to Albert Einstein's general relativity theory. His later work, concerned with the interior structure of stars, aroused much controversy. Milne received the Royal Society's Royal medal, 1941, and was president of the Royal Astronomical society, 1943-45.

Minot, George Richards, U.S. physician (b. Boston, Massachusetts, Dec. 2, 1885—d. Boston, Feb. 25), was professor of medicine at Harvard university, 1928-48. He was Nobel laureate in physiology and medicine, 1934 (jointly with G. H Whipple and W. P. Murphy), for his work on the liver treatment of pernicious anaemia.

Mizzi, Enrico, Maltese politician (b. Valetta, Sept. 20, 1885—d. Valetta, Dec. 20), was sentenced to one year's imprisonment during World War I for anti-British activities but was later pardoned, and in 1921 founded the Nationalist party and was elected to the Legislative Assembly. He was minister for industry and commerce, 1924-29, and became minister for public instruction in 1932 but was dismissed by the governor on Nov. 2, 1933, when the constitution was suspended. During 1924-27 and 1932-33 he acted as prime minister on several occasions. He was interned in East Africa because of his pro-Italian feelings in World War II, but was again elected to the Legislative Assembly in 1947. After the 1950 election Mizzi formed a minority government as leader of the Nationalist party.

Moeran, Ernest John, British composer (b. Heston, Middlesex, Dec. 31, 1894—d. County Kerry, Ireland, December), was educated at Uppingham school and at the Royal College of Music, London. After serving in World War I he studied composition under John Ireland. East Anglian and Irish folk-songs, of which he made a considerable collection, together with the music of Delius and the Elizabethan composers, were the main influences on Moeran's work, although in his general technique and use of harmony he was a "modernist." His early compositions were for small orchestras, and it was the playing of the *First Orchestral Rhapsody* (1922) by the Hallé orchestra under Sir Hamilton Harty in 1924 which brought Moeran into prominence. He also wrote piano pieces and vocal works, notably two song-cycles to words by James Joyce and A. E. Housman. In the late 1930s he turned to composition for larger ensembles, producing the *Symphony in G Minor* in 1938 and concertos for violin and 'cello in 1942 and 1945. One of his best-known works of this period was *Sinfonietta* (1945). Moeran's body was found in the River Kenmare on Dec. 2, 1950.

Morrison, Ian Ernest Macleavy, British journalist (b. Peking, May 31, 1913,—d. [on active service] Korea, Aug. 12), was professor of English at the Hokkaido Imperial university, Sapporo, Japan, 1935-37. After periods as private secretary to the British ambassador in Tokyo and in business in China, in 1941 he became deputy director of the Far Eastern bureau of the Ministry of Information and then war correspondent to *The Times*. His dispatches and far-sighted warnings and forecasts during the retreat down the Malayan peninsula brought him to the fore as a correspondent; he later wrote on many of the actions in southeast Asia and the southwest Pacific. After the Japanese armistice he reported the fighting in Burma, Indonesia, Indo-China and Malaya, and recorded the Chinese Civil War. Morrison continually urged the need for the western powers to work and trade with the Chinese Communist government, and in Korea he reported impartially the activities of the North Korean authorities in the over-run areas. His books included *Malayan Postscript* (1942) and *This War against Japan* (1944).

Mounier, Emmanuel, French Catholic man of letters (b. Grenoble, 1905—d. Châtenay-Malabry, March 22). After a period as lecturer in the history of philosophy at the lycée at Saint-Omer, he moved to Paris in 1932 and there founded *Esprit*, a monthly review modelled on Charles Péguy's *Cahiers de la Quinzaine*, which became the organ of the *personnaliste* philosophical movement. His most important works were *Introduction aux existentialismes* (1947) and *Le Personnalisme* (1950).

Muir, Kenneth, British army officer (b. Chester, March 6, 1912—d.

[in action] near Songju, Korea, Sept. 23), was commissioned in 1932, served on the North-West Frontier in 1935 and 1936-37 and was attached to the Sudan Defence force, 1939-43. On Sept. 23, 1950, Major Muir, as second in command, 1st battalion, the Argyll and Sutherland Highlanders, had taken command of the remnants of two companies of his battalion during an assault on the enemy-held "Hill 282," near Songju, Korea. Subsequently the companies' positions were accidentally attacked by U.N. aircraft and this caused further casualties and forced the highlanders to withdraw from the hill. Major Muir then led a counter-attack against the position, with only 3 officers and 30 other ranks. Encouraging his men to hold the crest, he moved about in the open distributing the unit's fast-diminishing ammunition and later himself manned a two-inch mortar. Finally, he was mortally wounded by two bursts of automatic fire but continued for a time to shout instructions and cheer on those around him. On Jan. 5, 1951, Major Muir was posthumously awarded the Victoria Cross; he had already been awarded the U.S. Silver Star for the same exploit.

Murray, Robert, British politician (b. Barrhead, Renfrewshire, 1870—d. Glasgow, Aug. 9), was Labour M.P. for the Western division of Renfrewshire from 1922 to 1924. He was also editor of the *Scottish Co-operator* for some years and director of the Scottish C.W.S.

Myers, Sir Michael, New Zealand lawyer (b. Motucka, N.Z., Sept. 7, 1873—d. Wellington, N.Z., April 8), was the first New Zealand lawyer to set up purely as a barrister. He took silk in 1922 and was chief justice from 1929 to 1946. He was created K.C.M.G. in 1930, was sworn of the Privy Council in 1931 and was made an honorary bencher of the Inner Temple in 1944.

Neville, Sir Reginald James, British politician (b. Bombay, Feb. 22, 1863—d. Norwich, April 28) was Conservative M.P. for Wigan, 1910-18, and for East Norfolk, 1924-29. He was created a baronet in 1927.

Ngata, Sir Apirana Turupa, New Zealand statesman (b. Kawakawa, Te Araroa, N.Z., July 3, 1874—d. Gisborne, N.Z., July 14), was educated at a native village school, at Te Aute Maori Boys' college and at Canterbury University college. He was the first Maori to receive a university degree. He practised for a few years as a lawyer, but in 1899, gave up his career in order to devote his energies to the preservation of Maori rights and culture. From 1905 to 1943 he was a member of the House of Representatives. He was appointed minister for native affairs in 1928 and at once began to work out a plan of Maori land settlement; he resigned in 1934. He was also acting attorney general, 1930-31, and acted for a time as prime minister. Ngata was a member of the senate of New Zealand university from 1929. He supervised the revision of the Maori Bible and at the time of his death was revising the Maori dictionary. He was knighted in 1927 and was made an honorary doctor of literature of New Zealand university in 1948.

Nijinsky, Vaslav (Waclaw), dancer and choreographer (b. Kiev, Ukraine, Feb. 28, 1890—d. London, April 8), was the son of a Polish dancer, Tomasz Niżyński. Pupil under Nicholas Legat at the Imperial school of dancing, St. Petersburg, he made his first appearance at the Mariysky theatre in 1906, being at once noted for his dramatic and mimetic power, and for his agility and *élévation*. He appeared with Sergei Diaghilev's company in Paris in 1909 and 1910, and, after his suspension from the Russian Imperial ballet for wearing a costume officially judged to be improper, joined Diaghilev's permanent touring company in 1911. He danced with notable success in *Le Spectre de la rose* and *Petrushka*, and, as choreographer, created the then sensational *L'Aprés-midi d'un faune* and *Le Sacre du printemps*. In 1913, after quarrelling with Diaghilev, Nijinsky left the company, but re-joined it in 1916. In that year he began to show signs of a disturbed mind which virtually brought his career to an end in 1918. After wanderings in Europe and a long stay in a Swiss sanatorium and later in Hungary, he settled in England in 1947.

Norman, Montagu Collet Norman, 1st Baron, of St. Clere, Kent, British banker (b. Much Hadham, Hertfordshire, Sept. 6, 1871—d. London, Feb. 4), was educated at Eton and Cambridge. The son of a banker, Frederick Henry Norman, he joined an old established firm of merchant bankers at the age of 19 and spent the early years of his career in London and New York in ultra-conservative circles. He served in the South African War (1900-1) and was awarded the D.S.O. In 1907 he was elected a director of the Bank of England and in World War I, at the request of the governor, Lord Cuncliffe, gave his full-time services to the bank. He was elected deputy governor in 1918 and governor in 1920. He held office for the unprecedented term of 24 years, a period which witnessed the inflationary aftermath of World War I, the efforts at economic reconstruction, the restoration (May 13, 1925) and abandonment (Sept. 19, 1931) of the gold standard and the outbreak of World War II. He was held responsible for the deflation of 1920-21. It was considered, however, that not only did this stop the unhealthy postwar boom but also started a slump. He worked hard to restore economic and monetary stability abroad, especially in Germany, Austria and Hungary. In Winston Churchill's decision to return to the gold standard, which in the light of subsequent events was generally regarded as premature, Norman's advice was an important factor. In 1923 he became a privy councillor and in July 1944, was created a baron.

Orwell, George (ERIC ARTHUR BLAIR), British writer (b. Motihari, Bengal, India, 1903—d. London, Jan. 20), was a King's Scholar at Eton, and served with the Indian Imperial police in Burma, 1922-27. A period of poverty in Paris and of living in English casual wards, 1926-30, gave him the material for his first book, *Down and Out in Paris and London*, published in 1933. In *The Road to Wigan Pier* (1937), he described the lives of those on unemployment pay or public assistance. Orwell served on the Republican side in Spain, 1936-37, with the syndicalist Catalan party militia. During this period his left-wing convictions underwent the change which was reflected in *Homage to Catalonia* (1938) and later in *Animal Farm* (1945), a satire on totalitarian society, and *Nineteen Eighty-Four* (1949), a "prophecy" of Britain in a wholly totalitarian world.

Parkinson, Hargreaves, British economist (b. Fleetwood, Lancashire, June 3, 1896—d. London, May 23), joined the staff of *The Economist* in 1923, was appointed city editor, 1928, and associate editor, 1935. He became editor of the *Financial News* in 1938, and was editor of *The Financial Times* (incorporating *The Financial News*), 1945-49.

Parsons, Sir Leonard Gregory, British paediatrician (b. Birmingham, Nov. 25, 1879—d. Birmingham, Dec. 17), was professor of paediatrics and child health in Birmingham university, 1925-46 (emeritus from 1946). A student of child health of international repute, he contributed to his field mainly through papers in the medical journals and lectures in the university and at the Royal Colleges; he was, however, joint editor of the authoritative *Diseases of Infancy and Childhood*. He was knighted in 1946 and elected F.R.S. in 1948.

Patel, Vallabhbhai Jhaverbhai, Indian statesman (b. Karamsad, near Nadiad, Gujarat, Oct. 31, 1875—d. Bombay, Dec. 15), came of a *patidar* (land sharing) family and was educated at Nadiad High school. He later went to London and was called to the bar by the Middle Temple, returning to practise at Ahmedabad, where he was also president of the municipality for four years. In 1916 he threw in his lot with Mahatma Gandhi and was subsequently imprisoned for his part in the civil disobedience movement; Gandhi called him *sardar* (captain), an unofficial title which he kept to his death. Patel was president of the Indian National Congress in 1931 and chairman of the parliamentary committee, 1935-42; when Congress governments were set up in seven (later eight) of the provinces it was he who controlled the ministries from behind the scenes, and his reputation as the "strong arm" of Indian politics grew. He was imprisoned three times during World War II, including a term from 1942 to 1945. On his release he took a leading part in the negotiations with the British that led to the setting up of the Indian interim government in Aug. 1946, in which he became member for home affairs, information and broadcasting. When complete Indian independence was realized in Aug. 1947, Patel was made deputy prime minister and added the responsibility of the princely states to his other portfolios. With determined efficiency he merged the 600 states into groups in the new dominion of India. Respected by conservative Hindu elements and at the same time a loyal collaborator with Nehru, Patel drove himself at a pace which contributed to the ill-health of his later years.

Peker, Recep, Turkish army officer and statesman (b. Istanbul, 1888—d. Istanbul, April 2), was educated at the military college in Istanbul. He fought in the Balkan Wars (1912-13), in World War I and in the Turkish War of Independence (1919-22). Elected deputy for Kutahya to the Grand National assembly in 1923 he became in the same year secretary general of the Republican People's party and editor of the daily newspaper *Ulus*. In 1924 he was appointed minister of the interior, the next year minister of defence and in 1928 minister of public works. From 1931 to 1937 he was again secretary general of the R.P.P. and in 1942-43 again minister of the interior. From Aug. 6, 1946, to Sept. 10, 1947, he was prime minister. He was considered to be the leader of the diehard section of the R.P.P.

Pemberton, Sir Max, British author (b. Birmingham, June 19, 1863—d. London, Feb. 22), published his first novel, *The Diary of a Scoundrel*, in 1891, and produced his best known book, *The Iron Pirate*, in 1893. He was editor of *Cassell's Magazine* from 1896 to 1906. He wrote over 40 successful books and plays, and was knighted in 1928.

Preysing-Lichtenegg-Moos, Count Konrad von, German cardinal (b. Kronwinkel, Bavaria, 1880—d. Berlin, Dec. 21), whose family was closely related to the Bavarian royal house, followed a diplomatic career for a time, but resigned and was ordained priest in 1912. He was consecrated bishop of Eichstätt in 1932, and of Berlin in 1935. He was elevated to the Sacred college in 1946. Cardinal von Preysing was actively opposed to the nazi regime before and during World War II and was equally outspoken in his opposition to Communist activities in Berlin and Eastern Germany after the war.

Prosser, David Lewis, Anglican bishop (b. Llangunnor, Carmarthen, June 10, 1868—d. Abergwili, Carmarthen, Feb. 28), was consecrated bishop of St. David's in Feb. 1927, and became in addition archbishop of Wales in Nov. 1944. Resigning the archbishopric in May 1949 because of ill-health, he retained the see of St. David's.

Pużak, Kazimierz, Polish politician (b. Tarnopol, in then Austrian Poland, Aug. 26, 1883—d. Rawicz, western Poland, April 30). After studying law at the University of Lwów he joined the Polish Socialist party (P.P.S.) in 1904 and a year later moved to the Russian part of Poland where he worked in the underground revolutionary movement. Arrested in 1911 by the *Okhrana* (Tsarist political police) and sentenced to eight years' hard labour, he served the sentence in chains and in solitary confinement. The Russian revolution of 1917 restored his freedom and in Aug. 1918 he began to reorganize the P.P.S. in Warsaw. On Poland's recovery of independence he represented Dąbrowa in the Constituent Assembly and later was thrice returned to the *Sejm* as deputy for Częstochowa. From 1921 to 1945 he was secretary general of the central executive committee of the P.P.S. During World War II he was prominent in the Warsaw underground resistance, in 1944 being elected chairman of the Council of National Unity (R.J.N.)—the parliament of the underground state. In March 1945, with 15 other resistance leaders, Pużak was arrested by the Soviet State Security police and tried on charges of organizing terrorism and sabotage. He denied the right of a Soviet tribunal to judge a Polish patriot for his activity in Poland and, refusing to testify, was condemned on June 21, 1945, to 18 months' imprisonment, being released, however, in December. Once more in Poland, he was re-arrested in June 1947 on a charge of espionage, and again denied the right of a Soviet-controlled government to sit in judgment. On Nov. 19, 1948, he was sentenced to 10 years' imprisonment.

Rastall, Robert Heron, British geologist (b. Whitby, Yorkshire, Nov. 8, 1871—d. Whitby, Feb. 3), at first worked as a scientific agriculturist, but later read geology at Cambridge where he was a fellow of Christ's college, 1906-13, and from 1926 onwards. A special lectureship in economic geology was created for him in 1919. He contributed two volumes to the Cambridge *Geological Series* and was editor of the *Geological Magazine* (from 1919) and of the geological articles in the 14th edition of *Encyclopædia Britannica.*

Rendall, Montague John, British headmaster (b. Great Rollright, Oxfordshire, 1862—d. Bushey Heath, Hertfordshire, Oct. 5), was educated at Harrow and Trinity college, Cambridge, where he read classics. He became an assistant master at Winchester in 1887 and was headmaster, 1911-24. In 1924-26 he undertook for the Rhodes trustees a world lecture and conference tour to expound the public school system and ideals. He was a governor of the B.B.C., 1927-33, and was made a C.M.G. in 1941.

Renner, Karl, Austrian statesman (b. Unter-Tannowitz [Dolni Dunajovice after 1918], Moravia, Dec. 14, 1870—d. Doebling, Vienna, Dec. 31), the son of a peasant, studied law at Vienna university. He soon established himself as a propagandist in the Austrian Social Democratic party, where he advocated the transformation of the Habsburg empire into a federal democratic commonwealth based on equal political and cultural rights for all nationalities. He was elected deputy in 1907 and, after the break-up of the empire, he became, on Nov. 12, 1918, the first chancellor of the Austrian republic. He then supported the idea of a union of Austria with a democratic federal Germany. He led the Austrian peace delegation to Paris and on Sept. 10, 1919, signed the peace treaty, by which Austro-German union was prohibited. He resigned the premiership in June 1920, but remained foreign minister until October. When in 1930 the Social Democrats became the stronger party, Renner was elected president of the *Nationalrat* (lower chamber); he resigned in 1933. After the annexation of Austria to Germany, Renner remained unmolested. In a public statement a few days before the plebiscite of April 10, 1938, he had recalled that he had already supported the *Anschluss* idea in 1918. After the liberation of Vienna by the Red army, Renner obtained approval from the Soviet high command for the formation of an Austrian democratic government and on April 29, 1945, became chancellor of the first government of the second Austrian republic. On Dec. 20, 1945, the newly elected *Nationalrat* nominated him president of the republic. Renner was the author of many political books and juridical treatises.

Richardson, Sir Albion Henry Herbert, British lawyer and politician (b. 1874—d. London, July 7), was Liberal M.P. for Peckham, 1910-18, and Coalition Liberal member for the same constituency, 1918-22. He began his legal career as a solicitor but was called to the bar in 1912, and in 1919 was knighted for his services on Home Office committees on the police and prisons. He took silk in 1930.

Roberts, Harold, British politician (b. Bridgwater, Somerset, Aug. 23, 1884—d. Rednal, Worcestershire, Sept. 28), was lord mayor of Birmingham, 1936-37, and Unionist M.P. for the Handsworth division of Birmingham from 1945.

Robinson, Sir Sydney Walter, British politician (b. Walthamstow, Essex, 1876—d. Snaresbrook, Essex, Nov. 17), was Liberal M.P. for Chelmsford, 1923-24. He had been an alderman of the Essex County council for 30 years, and was knighted in 1934.

Romanones, Alvaro de Figueroa y Torres-Mendieta, Conde de, Spanish statesman (b. Madrid, Aug. 9, 1863—d. Madrid, Sept. 11), was president of the Chamber of Deputies, 1911, before becoming prime minister in 1912, after the assassination of José Canalejás. Later, as leader of the opposition, he approved the government policy of neutrality in World War I and pursued this policy in his second term as prime minister, 1915-17; in the latter year, however, he fell from power as a result of a German-inspired press campaign, also resigning his leadership of the Liberals. Romanones was minister of justice in Antonio Maura's government in 1918, becoming foreign minister under the Marquis de Alhucémas in October and prime minister in December of the same year. In April 1919, he was again deposed—by military *juntas*—returning to office in 1922-23 as minister of justice, again under Alhucémas. After the dictatorship of Primo de Rivera, 1923-31, during which he remained loyal, notably as speaker of the senate, to the throne and constitutional principles, he was minister of state for a short time. To the end, although he often criticized the king, he pleaded for the preservation of the monarchy. Arrested by the Republicans during the Civil War, he was later released and given safe conduct to France, thenceforward devoting himself to literary activity. Among his books was *Las Responsibilidades Politicas del Antiguo Régimen de 1875 a 1922* (1924).

Roman y Reyes, Victor Manuel, Nicaraguan statesman (b. 1873?—d. Philadelphia, May), held diplomatic posts in the U.S., was Nicaraguan foreign minister, and was president of the republic from 1947. He had gone to Philadelphia in March for cancer treatment.

Rosbotham, Sir (Samuel) Thomas, British politician (b. 1864—d. Southport, Lancashire, March 12), was Labour M.P., Ormskirk division of Lancashire, 1929-31. He was one of the Labour members who followed Ramsay MacDonald in the crisis of 1931; he defeated the official Labour candidate at Ormskirk, however, and continued to represent the division as National Labour member until 1939. He was knighted in 1933.

Rouse, William Henry Denham, British headmaster and classical scholar (b. Calcutta, May 30, 1863—d. North Hayling, Hampshire, Feb. 10), was educated at Haverfordwest Grammar school, at Doveton college, Calcutta, and at Christ's college, Cambridge, where he was a scholar, a fellow, 1888-94, and an honorary fellow from 1933. He became headmaster of the Perse school, Cambridge, in 1902, a post which he held until 1928. He and his school became renowned for his teaching and energetic headmastership. His *Chanties in Latin and Greek* (1923) and *A Greek Boy at Home* were school books written to serve the " direct " method of teaching Latin and Greek—that is, teaching them as living languages—which Rouse developed at the Perse. The method was expounded in his book with R. B. Appleton, *Latin on the Direct Method* (1923). Rouse was editor of the *Classical Review* for many years, and of the Loeb Classical Library series of parallel texts to which he himself contributed *Lucretius* and *Seneca.* His other published works included exploration of the oriental and folklore fields.

Royden, Thomas Royden, 1st Baron, of Frankby in the County Palatine of Chester, British shipping industrialist and politician (b. Frankby, Cheshire, May 22, 1871—d. Alresford, Hampshire, Nov. 6), was chairman of the Cunard Steamship company from 1922 and was concerned with the direction of many other shipping companies. In 1919 he was made a C.H. for his services in connection with sea transport in World War I. He was Conservative and Unionist M.P. for Bootle, 1918-22, and was created a baron in 1944.

Ryle, John Alfred, British physician (b. Brighton, 1889—d. Sutton, near Pulborough, Sussex, Feb. 27), was Hunterian professor, Royal College of Surgeons, 1932, Regius professor of Physic, Cambridge university, 1935-43, and Nuffield professor of social medicine, Oxford university, from 1943. He was physician to H.M. Household, 1932-36, and physician extraordinary to the King from 1936. Ryle was a member of the visiting group to advise the Indian government's Health Survey and Development committee, 1944, and of the Asquith Commission on Higher Education in the Colonies, 1944-45.

Rzymowski, Wincenty, Polish journalist and politician (b. Warsaw, July 19, 1883—d. Warsaw, April 30), was educated at the universities of Geneva, Lausanne and Odessa. During World War I, as editor of *Widnokrąg*, a weekly newspaper in Warsaw, he fought for the independence of Poland opposing both the " Russian " and the " Austro-German " solutions of the problem. From 1923 he was correspondent in Italy of the Socialist daily newspaper *Robotnik*, but was expelled by the fascist government in 1927. Returning to Poland he combined journalism with left-wing politics. During World War II he joined the Soviet-sponsored Polish Committee of National Liberation. From June 1945 to February 1947 he was minister of foreign affairs.

Saarinen, Eliel, Finnish-born U.S. architect (b. Helsinki, Aug. 20, 1873—d. Bloomfield Hills, Michigan, July 1), designed many buildings in Finland, including the National museum, Helsinki railway station and other public buildings and estates. His design for the Chicago Tribune tower, 1922, although not used, had a profound influence on skyscraper design. Saarinen settled in the U.S. in 1923, and from 1925 to 1940 was head of the architectural department, and for a time president, of the Cranbrook Academy of Arts, Bloomfield Hills, for which he himself had designed the buildings.

Sabatini, Rafael, British novelist and playwright (b. Iesi, central Italy, 1875—d. Adelboden, Switzerland, Feb. 13), son of an Italian father and English mother, was educated in Portugal and Switzerland. He published his first novel in 1904. His second, *Bardelys the Magnificent* (1906), won him popular favour as a dashing historical novelist; it was succeeded notably by *The Sea Hawk* (1915), *Scaramouche* (1921), and *Captain Blood* (1922). He adapted *Bardelys the Magnificent* and *Scaramouche* for the stage and wrote two or three original plays. Several of his books were filmed. He was naturalized British in 1918.

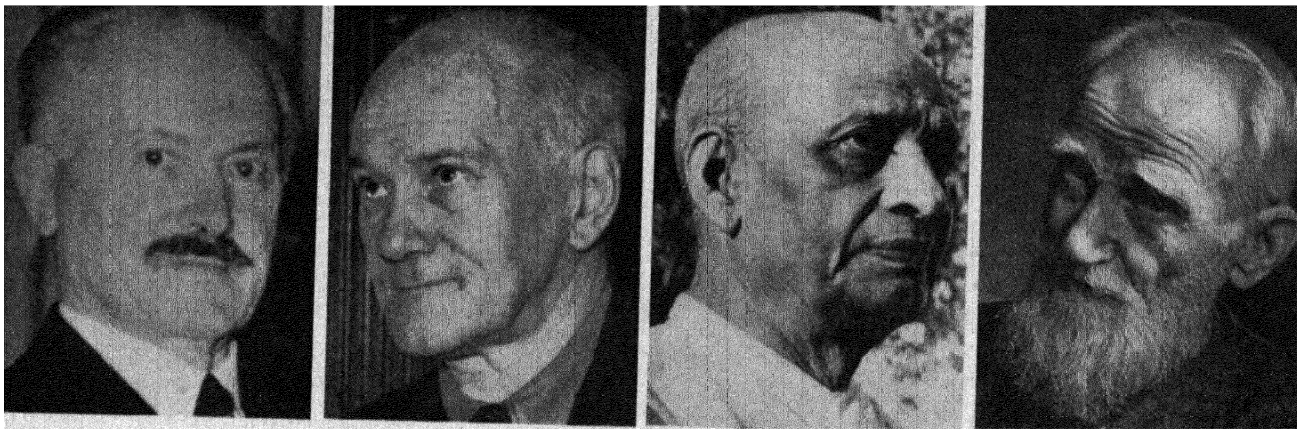
St. Johnston, Sir Reginald, British colonial administrator (b. Edgbaston, Warwickshire, 1881—d. Eastbourne, Sussex, Aug. 29), began his career in medicine, was later called to the bar, and served in Fiji from 1907 in various legal, medical and administrative capacities. In World War I he took charge of the Fijian contingent on the western front. He held various posts in the Falkland and Leeward Islands, 1920-29, and in 1929 was appointed governor of the latter. He was created K.C.M.G. in 1931 and retired in 1936. He wrote a number of books on the Pacific islands and the West Indies and some novels.

Sandford, Sir George Ritchie, British colonial governor (b. Ambleside, Westmorland, Nov. 9, 1892—d. Nassau, Bahamas, Sept. 17), joined the colonial service in 1915 and served in east Africa and Palestine. He was administrator to the East Africa High commission in 1948-49. In Feb. 1950 he was appointed governor of the Bahamas. He was made a K.B.E. in 1947.

Sandvig, Anders Uchermann, Norwegian collector (b. May 11, 1862—d. Feb. 11), was by profession a dentist, but perturbed by the destruction of old houses and the sale abroad of Norwegian peasant furniture, silver and pottery, he formed the famous open-air museum at Maihaugen, near Lillehammer. Here, such objects were preserved in reassembled centuries-old farmhouses, cottages and workshops.

Sangnier, Marc, French politician (b. Paris, April 3, 1873—d. Paris, May 28), passed through the Ecole Polytechnique (the military engineering school) but became preoccupied with social problems and Christian duty. At the age of 21 he founded *Le Sillon*, which became the weekly organ of a Christian Democratic movement and had a widespread influence. Conservative Catholics were alarmed and it was not difficult to find points of doctrine about which Sangnier had made rash statements. Pius X condemned *Le Sillon* on Aug. 25, 1910, and Sangnier, submitting to the Holy See, stopped the paper and dissolved his political organization. He began publication of another weekly, *La Démocratie*, and in 1919 was elected to the Chamber of Deputies. He was not re-elected in 1924 but as president of the Ligue de la Jeune République continued his activity on questions of social injustice. Soon after World War I he pleaded the cause of Franco-German reconciliation. During World War II he was imprisoned by the Germans. He returned to parliament in 1945 but did not play an active part. He was made honorary president of the Mouvement Républicain Populaire.

Schumpeter, Joseph Alois, Austrian-born economist (b. Třešt, Moravia, Feb. 8, 1883—d. Taconic, Connecticut, Jan. 8), went to Columbia university, New York, in 1913 as an exchange professor from his post as professor of economics at Graz, Austria. He was also



Albert Lebrun *Vaslav Nijinsky* *Vallabhbhai Patel* *George Bernard Shaw*

professor of economics at Bonn university from 1925 until 1932, when he assumed a similar post at Harvard. He was at one time minister of finance in the Austrian government. His *Capitalism, Socialism and Democracy* (1942) contended that socialism would emerge from an inevitable collapse of capitalism, and in a second edition of this work in 1947 he maintained that this thesis was being sustained in fact. He also wrote *Theory of Economic Development* (1911) and *Business Cycles* (1939).

Scott, Sir Leslie Frederic, British lord justice of appeal and politician (b. Oct. 29, 1869—d. Oxford, May 19), was educated at Rugby and New college, Oxford. He was called to the bar in 1894, and joined the northern circuit. Among his earlier pupils was Lord Birkenhead. He had a practical knowledge of mining, and was an expert in maritime law, being honorary secretary of the International Maritime committee and British delegate to the International Conferences on Maritime Law, Brussels, 1909, 1910, 1922 and 1926. He was Conservative member of parliament for the Exchange division of Liverpool, 1910-29, and solicitor general, 1922, in which year he was also knighted. He was sworn of the Privy Council in 1927, and was created a lord justice of appeal in 1935. He was president of the Central Association for Mental Welfare from its start in 1914 till 1947. In 1941-42 he was chairman of the Committee on Land Utilization in Rural Areas.

Seabrooke, Elliott, British landscape painter (b. Upton Park, Essex, 1886—d. Nice, March 6), first exhibited at the New English Art club in 1911. He was war artist on the Italian front during World War I. He was an early member of the London group, with whom he most frequently exhibited, and is represented at the Tate gallery and in the collection of the Contemporary Art society.

Seitz, Karl, Austrian politician (b. Vienna, Sept. 4, 1869—d. Vienna, Feb. 3), the son of a wood merchant, was educated at St. Pölten Teachers' college. He joined the Social Democratic party in 1888, was elected to the Austrian Reichsrat in 1901 and was afterwards repeatedly re-elected. After the break-up of the Austro-Hungarian empire he presided over the German-Austrian National Assembly which, on Nov. 12, 1918, proclaimed Austria as a "democratic republic" and "a component part of the German republic." He was also elected speaker of the Constituent Assembly (March 1919—Oct. 1920) and until Nov. 1920 was acting president of the republic. As burgomaster of Vienna, from 1923 to 1934, he was responsible for co-ordinating a vigorous and revolutionary programme for the rapid extension of the social services and the municipal housing schemes. After the Socialist rising of Feb. 1934 he was removed from office and arrested by the Dollfuss goverment, but was released in December. He lived in Vienna unmolested until July 1944 when he was sent by the nazis to Ravensbrück concentration camp. Liberated by the Allied victory, he was made honorary chairman of the reconstituted Austrian Social Democratic party.

Shaw, George Bernard, British dramatist, novelist, essayist, critic and political thinker (b. Dublin, July 26, 1856—d. Ayot St. Lawrence, Hertfordshire, Nov. 2), was the son of George Carr Shaw, an unsuccessful civil servant turned corn broker, and his wife Lucinda Elizabeth. From the Wesleyan Connexional school, Dublin, and three others that he attended Bernard chose to learn little or nothing; but from his mother, he learned an appreciation of music. His uncle, William George Carroll, rector of St. Bride's, Dublin, tutored him in Latin and constant browsing in the National Gallery of Ireland and enthusiastic reading of Vasari's *Vite* gave him an appetite for the visual arts. In Nov. 1871 he was put to work in a Dublin land agent's office and by 1876 had done well enough to become chief cashier. At the end of March of that year, however, he threw up his job and joined his mother, now a music teacher in London. For a time he earned a little as a "ghost" music critic. After staying at home to write a novel called *Immaturity* (eventually published in 1930) the need for a steadier livelihood forced him to seek a post with the Edison Telephone company; but seven months later he put all thoughts of a business career behind him, and settled down to novel-writing and living on his mother ("I made a man of myself—at my mother's expense—instead of a slave"). The four books that he produced in 1880-83 were used as "fillers" in obscure "progressive" magazines but were turned down by every London and New York publisher to whom they were submitted.

In 1879 Shaw had struck up what was to be a lasting friendship with Sidney Webb (who later founded the London School of Economics). In 1882 he had "discovered" Socialism at a meeting addressed by the U.S. Socialist pioneer Henry George; in 1884, a literary failure and a man of austere habits with time on his hands, he studied in the British Museum library and read Karl Marx's *Das Kapital*. The outcome of these events was that in the latter year he and Webb joined the newly formed Fabian society. As a Fabian, Shaw played a leading part in making Socialism constitutional and workable; moreover he came to know such Socialist pioneers as William Morris, Annie Besant and J. Ramsay MacDonald. He subsequently wrote a good deal for and about the society.

Meanwhile, through the good offices of William Archer, translator of Ibsen, he began his journalistic career in earnest. He was first book reviewer to the *Pall Mall Gazette*, 1885-88, then art critic to the *World*, 1886-89, music critic (as "Corno di Bassetto") to the *Star*, 1888-90, and to the *World*, 1890-94. In 1895-98 he undertook his most important period of critical journalism as theatre critic to the *Saturday Review*. As "Corno di Bassetto" he had championed the hated Wagner (he later wrote *The Perfect Wagnerite*, 1898) and now, in the *Review*, he attacked Shakespeare and "Bardolatry," as he called it, and acclaimed the "upstart" Ibsen (he had already published the *Quintessence of Ibsenism* in 1891).

In 1892, Shaw's first play, *Widowers' Houses* (on slum landlordism) had been performed in London and had been bitterly attacked in the press. In the following year *Mrs. Warren's Profession*, an exposition of prostitution, was published but was refused a license by the lord chamberlain. But Shaw had now deliberately adopted the profession of playwright; if he could not have *succès d'estime* he was at least rewarded with *succès de scandale*. *Arms and the Man*, however, was a departure from the social evangelism of Shaw's first two plays and was successfully presented in London and New York in 1894. *Candida* was produced in 1895, *The Devil's Disciple*, his greatest box-office success of this time, in 1896, and *Man of Destiny* in the same year. (In 1898 *Widowers' Houses*, *The Philanderer*, 1893, and *Mrs. Warren's Profession* were re-published together as *Plays Unpleasant;* and *Arms and the Man*, *Candida*, *Man of Destiny* and *You Never Can Tell*, 1898, as *Plays Pleasant*). Aside from his ever-increasing literary activities Shaw had time to serve on the St. Pancras vestry (later borough council), 1897-1903, an experience which gave him the material for *The Commonsense of Municipal Trading* (1904).

In the period between the turn of the century and the outbreak of World War I, play followed play. Shaw finished *Caesar and Cleopatra* in 1899. In 1901 *The Admirable Bashville* (a dramatization of *Cashel Byron's Profession*, one of his early novels) was published, and in 1902 he wrote *Man and Superman* which in 1908 enjoyed a prodigious success in New York. It was *John Bull's Other Island* (1904), however, which established Shaw as a leading playwright in London. There followed *Major Barbara* (first performed 1905), *The Doctor's Dilemma* (performed 1906), *Pygmalion* (written 1912) and *Androcles and the Lion* (first performed 1913). In the main the critics continued to assail his plays as shapeless and his satire as merely destructive, and players thought his parts too "thin" to act; the play-going public remained bewildered but enthusiastic.

During World War I Shaw became unpopular through his comments on the conflict (*Commonsense About the War*, 1914, among them). After the war, however, his popularity returned with the plays *Heartbreak House* (published 1919), *Back to Methuselah* (completed 1920) and *St. Joan* (written 1923) and in 1925 he received the Nobel Prize for Literature. He then spent three years writing *The Intelligent Woman's Guide to Socialism and Capitalism* (published 1928) for his wife's sister (G.B.S. had married in 1898; Mrs. Shaw died in 1943). In 1928 the Shaw festival at Malvern was founded by Sir Barry Jackson and was opened with *The Apple Cart*.

In 1931-36, despite world-wide lecture tours G.B.S. found time to write a number of lesser-known plays and other works, such as the pamphlet *The Adventures of The Black Girl in search of God*. By the late 30s he was producing little new work (a notable exception was the play *Geneva*, first performed 1938, revised 1947). In 1949 he published the autobiographical *Sixteen Self Sketches;* but his last

plays, *Buoyant Billions* (1949) and *Far-Fetched Fables* (1950), added little or nothing to his reputation.

Shaw accepted few public honours. The first Labour government would have made him a peer and given him the Order of Merit, but Shaw said "I do not wish to sit in the House of Lords and I have already conferred the O.M. on myself." He received the freedom of the City of London in 1935 and of Dublin and St. Pancras, the borough which he had served as vestryman 50 years before, in 1946. (*See* also SHAW, GEORGE BERNARD in *Encyclopædia Britannica*).

Shaw, Herman, British geophysicist and museum director (b. Huddersfield, Yorkshire, Oct. 14, 1891—d. London, May 4), began his career in the field of aeronautical research, but later joined the department of physics and geophysics of the Science museum, South Kensington, becoming its keeper in 1935. He became director and secretary of the museum in 1945. He was well known for work on applied geophysics, including the development of a method of prospecting by means of the Eötvös balance. He contributed the article on gravitation to *Encyclopædia Britannica*.

Sidky (Pasha), Ismail, Egyptian statesman (b. Alexandria, 1875—d. Paris, July 9), son of Ahmed Shukry Pasha, an under secretary of state. He gained his diploma at the Collège des Frères and won honours at the Kedhival law school. He joined the public prosecutor's office but in 1899 became administrative secretary of the Alexandria municipal commission. In 1914 he was appointed minister of agriculture and then of *waqfs* (religious institutions). In 1915, however, he joined the Wafd (Nationalist) movement and was deported with Zaghlul Pasha and others to Malta. After World War I he deserted the Wafd, in 1921 and 1922 was minister of finance and in 1922 and 1924-25 minister of the interior. He retired from politics for five years but returned eventually as premier and, from June 1930 to Sept. 1933, ruled with an iron hand to curb the Wafd's influence. He joined an all-party delegation to negotiate the Anglo-Egyptian treaty of 1936, but in 1938 again retired from politics after a period of service as minister of finance. He returned to power in Feb. 1946 as premier and advocated the revision of the 1936 treaty. In October he flew to London but failed in his efforts to achieve the unity of Egypt and the Sudan under the Egyptian crown. He resigned on Dec. 8, 1946.

Sleator, James Sinton, Irish portrait painter (b. County Armagh—d. Dublin, Jan. 19), became president of the Royal Hiberian academy in 1946. He was an occasional exhibitor at the Royal Academy and the Royal Society of Portrait Painters, and is represented in the Belfast art gallery and at St. Thomas's hospital, London. His pupils included Winston Churchill.

Smedley, Agnes, U.S. writer on China (b. northern Missouri, 1894—d. Oxford, England, May 6), first visited China in 1928, was far eastern correspondent for the *Frankfurter Zeitung* and was a special correspondent in China for the *Manchester Guardian* during World War II. She felt it to be her mission to evoke sympathy for China in a series of articles and books—the latter including *China Fights Back* and *Battle Hymn of China*—written during and after her 12-year stay in that country. Her political views were close to those of the Communists, and latterly she was preparing a life of Chu Teh.

Smith, Martin Linton, Anglican bishop (b. July 4, 1869—d. Cheltenham, Oct. 7), was awarded the D.S.O. in World War I. He was appointed suffragan bishop of Warrington in 1918, was bishop of Hereford, 1920-30, and of Rochester, 1930-39.

Smuts, Jan Christiaan, South African statesman (b. near Riebeek West, Malmesbury district, Cape colony, May 24, 1870—d. Irene, near Pretoria, Sept. 11), was the son of a prosperous Boer farmer and Cape parliamentarian; his mother was of Huguenot origin. He was educated at Riebeek West and at Victoria college (now the university), Stellenbosch; in 1891, he went to Christ's college, Cambridge, later taking a double first in law. Smuts was admitted to the Capetown bar in 1895. At first he supported Cecil Rhodes, but after the Jameson raid (Dec. 29, 1895) ranged himself alongside Paul Kruger. In 1898, though under the legal age, he became state attorney of the South African (Transvaal) republic and took part in the abortive negotiations with the British on the franchise of the *uitlanders*. In the South African War which followed, Smuts fought under General Jacobus de la Rey in the western Transvaal; in 1901, he was given supreme command of the Boer commandos in Cape colony, where he showed himself to be a brilliant guerrilla tactician. At the Vereeniging peace conference, 1902, he sided with General Louis Botha in urging compromise for the sake of peace. He later refused a seat in the nominated legislative assembly and, with Botha, founded *Het Volk* (afterwards the South African party), an organization with a policy of racial tolerance.

In 1906 Smuts visited London and secured responsible government for the Transvaal and Orange Free state. In the following year he was colonial secretary in Botha's Transvaal administration, and when the Union of South Africa (which Smuts had publicly advocated in 1908) was founded in May 1910, Botha gave him the portfolios of the interior and mines (which he held until 1912) and of defence (which he retained until 1920) in the first Union government; in 1912 he also became minister of finance.

In Sept. 1914 Smuts became commandant general, organizing a new defence department to direct operations against the rebellion of Generals Christian De Wet, Christian Beyers and others, and in German South West Africa. In 1916 he conducted an energetic campaign in German East Africa at the head of a mixed British, South African, Indian and native force. He was South African representative at the Imperial Defence conference in 1917 and was sworn of the Privy Council; after the conference he made his famous declaration on the British Commonwealth of Nations. He remained in London as a member of the war cabinet. During this period he supervised the London air defences and was prominent in the formation of the unified Royal Air Force. After the armistice, Smuts wrote *The League of Nations: A Practical Suggestion* which in effect became the League Covenant. With Botha, he represented South Africa at the peace conference. He became prime minister in 1919, returning to London in 1921 and 1923 to attend the Imperial conference, visits during which he repeatedly stressed his belief in the League.

In the general election of 1924, Smuts's opponents made capital from his use of troops in the suppression of the Johannesburg strike of 1922; the South African party was defeated and Smuts himself lost his seat. During his period as leader of the opposition, 1924-33, he published a philosophical work, *Holism and Evolution* (1926); he was politically active with such matters as his membership of the all-party committee on General James Hertzog's Native Affairs bill. By the beginning of 1933, the threat of a split within the Nationalist party compelled the formation of a national government, in which Smuts served under Hertzog as deputy prime minister and minister of justice. In 1934, Hertzog and Smuts effected an almost complete synthesis of their respective followings into a new National party.

On the outbreak of World War II, Hertzog, advocating South African neutrality, was defeated in the Assembly, the fusion government ended and Smuts became prime minister, retaining the portfolio of external affairs and defence. In Jan. 1940 Hertzog, pressing for a separate peace with Germany, was again defeated and he and Daniel Malan united on a republican basis. In 1941 Smuts was appointed commander of the Union defence forces and was promoted to field marshal, but asked that he should continue to be known by his old rank of general. He visited London in 1942 and 1943, attending meetings of the war cabinet and, in 1942, addressing parliament. He was prominent in the formation of the United Nations in 1945 and was author of the preamble to the Charter. In South Africa he now had to deal with the dispute with India over the Indians living in South Africa and with the problem of South West Africa, which he wished to be incorporated into the Union. Malan's Nationalists pressed their *apartheid* policy as a solution of the problem of the non-Europeans. Smuts's government was defeated and he lost his seat; he was later returned at Pretoria East, to lead the opposition with his accustomed vigour. In Oct. 1949, the Nationalist government removed Smuts from the post of commander in chief of the Union defence force.

Smuts, acknowledged even by his political enemies as South Africa's greatest son, received many honours. He was created a Companion of Honour in 1917 and a member of the Order of Merit in 1947. He was a freeman of the City of London and many other cities. He was rector of St. Andrew's university, 1931-34, chancellor of Capetown university from 1936 and of Cambridge university from 1948, and received 21 honorary degrees. In 1897 he had married Sybella Margaretha Krige, later known affectionately as *Ouma* (granny) throughout South Africa. Smuts had been ill since the end of May, with pneumonia and influenza.

Stanley, Oliver Frederick George, British politician (b. May 4, 1896—d. Sulhamstead, Berkshire, Dec. 10), was the second son of the 17th Earl of Derby. He was educated at Eton, and served in the Royal Field Artillery in World War I, receiving the Military Cross and the Croix de Guerre. He was called to the bar in 1919 and later became a stockbroker. In 1923 he unsuccessfully contested the Edgehill division of Liverpool but from 1924 to 1945 sat for Westmorland. From 1945 until his death he represented West Bristol. He became under secretary to the Home Office in 1931 and two years later was appointed minister of transport. He was given cabinet rank in June 1934 as minister of labour, but in June 1935 was transferred to the board of education. In 1937 he was appointed president of the board of trade, and in Jan. 1940 he succeeded Leslie Hore-Belisha as secretary of state for war. Stanley rejoined the R.F.A. in 1940 but returned to politics in Nov. 1942 as secretary of state for the colonies, remaining in this office until the general election of 1945. It was in this post that he achieved most success. In the House of Commons he was an excellent debater with a keen wit. In 1948 he succeeded his father as chancellor of Liverpool university.

Stapledon, (William) Olaf, British writer (b. Wirral, Cheshire, May 10, 1886—d. West Kirby, Cheshire, Sept. 6), was best known for his scientific fantasies, which included *Last and First Men* (1930), *Last Men in London* (1932), *Odd John* (1935), *Sirius* (1944) and *Death Into Life* (1946). His first book, however, had been a philosophical work, *A Modern Theory of Ethics* (1929), and *New Hope for Britain* (1939) was an exposition of his liberal-humanist and scientific attitude. In *Philosophy and Living* (1939) his not uncritical sympathy with Communism was particularly apparent. Latterly, Stapledon had participated in a number of Communist-sponsored international conferences.

Steinhardt, Laurence A., U.S. diplomat (b. New York, Oct. 6, 1892—d. [in an air accident] near Ottawa, March 28), was a successful lawyer and businessman; he was a member of the Democratic party executive committee and was one of the closest friends of President Roosevelt, who appointed him minister to Sweden when the Democrats came into office in 1933. Steinhardt was also minister to Peru, 1937-39, ambassador to the U.S.S.R., 1939-41, to Turkey, 1941-44, to the Czechoslovak governments in London and later in Prague, 1945-48. In 1948 he was appointed ambassador to Canada.

Stephens, James, Irish writer and poet (b. Dublin, Feb. 1882—d. Dublin, Dec. 26), was brought up in poverty and was a struggling solicitor's clerk when he met the Irish writer George Russell ("Æ"), who encouraged him to develop his literary abilities. In 1912 he published *The Crock of Gold* which brought him public recognition and won him the Polignac prize. His work was grounded on Celtic folk-lore and fantasy and Irish idiom; the enriched simplicity of his language evoked a world in which reality and dream seemed to interfuse. His poetry included *Songs from the Clay* and *The Adventures of Seumas Beg* (1915), and *Kings and the Moon* (1938); his *Collected Poems* was published in 1926. Among his prose works were

The Charwoman's Daughter (1912), *Deirdre* (1923) and *Etched in Moonlight* (short stories, 1928). He also wrote various critical works and a play *Julia Elizabeth* (1929). Stephens was an ardent Sinn Feiner.

Stimson, Henry Lewis, U.S. statesman (b. New York, Sept. 21, 1867—d. Huntington, Long Island, New York, Oct. 20), was educated at Phillips Andover academy, Yale university and Harvard university law school, was admitted to the New York bar in 1891 and began legal practice under Elihu Root in 1893. In 1906 he was appointed U.S. attorney for the southern district of New York. After standing unsuccessfully as Republican candidate for the New York state governorship in 1910, he became secretary for war in President William H. Taft's government in 1911. He served in the U.S. field artillery in France during World War I and returned to private legal practice in 1918. In 1927, however, President Calvin Coolidge sent him to Nicaragua as mediator between the warring factions in that republic. In the same year he was appointed governor general of the Philippines, but in 1929 returned to the U.S. to become secretary of state in President Herbert Hoover's administration. During his period in this post (1929-33) he became well-known as the author of the " Stimson doctrine " the policy of withholding recognition of conquests made by the Japanese in Manchuria in 1931. In 1940 President Franklin D. Roosevelt recalled Stimson to become secretary for war, a post which he held until Sept. 1945. Among his publications were *Democracy and Nationalism in Europe* (1934), *The Far Eastern Crisis* (1936) and his memoirs, *On Active Service in Peace and War* (1948). (*See* also *Encyclopædia Britannica.*)

Straus, Ralph, British novelist and biographer (b. Manchester, Sept. 5, 1882—d. London, June 5), wrote *The Man Apart*, in 1906, followed by *John Baskerville, a Memoir* (1907), and a succession of over 20 novels, literary biographies and other works. These included *The Unspeakable Curll* (1927), a continuation of his work on 18th-century bibliography, two books on Charles Dickens and one on George Augustus Sala; his collection of material on Sala was one of the most comprehensive in private hands. Straus contributed book reviews to the London press for many years.

Suggia, Guilhermina, Portuguese 'cellist (b. Oporto, Portugal, June 27, 1888—d. Oporto, July 31), played from an early age with the Oporto City orchestra, becoming principal 'cellist at the age of 12. In 1904 she began to study at Leipzig under Paul Klengel, and made her debut as a soloist there at a Gewandhaus concert in 1905. She studied further with Paú Casals and then began the long tours which established her international reputation. Suggia lived in England for several years between the two World Wars, and returned after World War II to play on a number of occasions in London, and at the 1949 Edinburgh festival.

Sykes, Sir Alan John, 1st baronet, British politician, (b. Cheadle, Cheshire, April 11, 1868—d. Cheadle, May 21), was Unionist M.P. for the Knutsford division of Cheshire, 1910-22. He was created a baronet in 1917.

Sykes, Sir Charles, 1st baronet, British wool industrialist and politician (b. Dec. 31, 1867—d. Woking, Surrey, Nov. 16), was director of wool textile production and chairman of the Board of Control of the Worsted and Woollen Trades in World War I and was created a K.B.E. in 1918. He was Coalition Liberal M.P. for Huddersfield, 1918-22, being created a baronet in 1921.

Tani, Yukio, Japanese *judo* wrestler (b. Tokyo, 1881—d. London, Jan. 24), was brought to England from Japan and was first seen at the Empire music hall in 1899. Thenceforward he challenged and defeated European wrestling champions under their own rules. Under his conditions no European could give him a match. In 1918 he became instructor at the Budokwai, a club founded in London for the study of *judo*. Budokwai teams, mainly his own pupils, gained an almost unbroken series of victories against other European teams. Yukio Tani suffered a stroke in 1937 which compelled him to give up active *judo*.

Theodore, Edward Granville, Australian politician (b. Port Adelaide, South Australia, Dec. 29, 1884—d. Sydney, N.S.W., Feb. 9), worked as a miner and trade union official before being elected to the Queensland Legislative Assembly in 1909. He became deputy leader of the Labour party in the House, was state treasurer, 1912-19, minister of public works, 1915-19, and state premier, 1919-25. He was, at his election, the youngest empire premier and premier of the only Socialist administration in the empire. He was a member of the federal House of Representatives, 1927-31, deputy leader, federal Labour party, 1928-30 and 1931, and Commonwealth treasurer in the same years.

Thomas, Bertram Sidney, British explorer and orientalist (b. Easton-in-Gordano, Bristol, June 13, 1892—d. Easton-in-Gordano, Dec. 27), after serving as a British political officer in Mesopotamia and Trans-Jordan, 1918-24, was *wazir* and finance minister, Muscat and Oman, 1925-30. During his service in Arabia he explored and surveyed much of the unknown hinterland, and in 1931 he became the first European to cross the Rub al Khali, covering a distance of 900 mi. across desert in 58 days. Among his several books was *Alarms and Excursions in Arabia*. In 1944-48 he was director of the Middle East Centre for Arab Studies and in 1949 was created C.M.G.

Togo, Shigenori, Japanese statesman and diplomat (b. Kagoshima, Japan, 1882—d. Tokyo, July 23), served as ambassador in Berlin, 1937-38, and Moscow, 1938-40. He became foreign minister in Hideki Tojo's cabinet in 1941, a few months before the attack on Pearl Harbour. He was appointed foreign minister again in 1945, and was one of the signatories of the Japanese surrender. At the time of his death he was serving a 20-year sentence for war crimes.

Twort, Frederick William, British bacteriologist (b. Camberley, Surrey, Oct. 22, 1877—d. Camberley, March 20), was director of the University of London Brown Animal Sanatory institution and professor of bacteriology in the university from 1909 to 1944. In 1915 he discovered the bacteriophage -a filterable substance, now regarded by most students as a virus, which causes the dissolution of bacteria; he also discovered the first vitamin (K) for the culture of the leprosy bacillus. He was elected a fellow of the Royal Society in 1929.

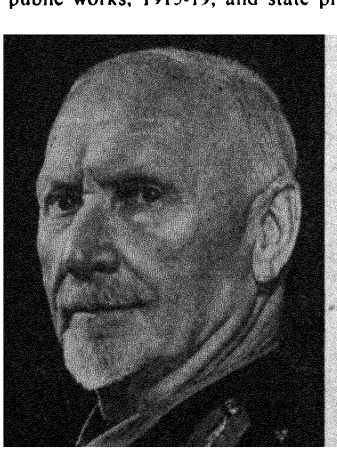
Ure, Percy Neville, British classical scholar and archaeologist (b. Stoke Newington, London, May 10, 1879—d. Reading, Berkshire, April 3), was professor of classics at Reading university from 1911 to 1936. He was engaged for 15 years upon the excavation of the ancient Greek city of Mykalessos. Among his writing was a work on the Greek tyrants, *The Origins of Tyranny*, published in 1922, and he was working on the publication of the Reading Greek vases for the *Corpus Vasorum Antiquorum* at the time of his death.

Walker, Walton Harris, U.S. general (b. Belton, Texas, Dec. 3, 1889—d. [killed in a motor accident] Korea, Dec. 22), served in the Vera Cruz expedition, 1914, and in France and Germany during World War I. In 1930-33 he was with the international railway patrol in China. During World War II he commanded the so-called " ghost corps " of the U.S. 3rd army in Europe, 1944-45. He then commanded the U.S. 5th army, 1946-48. In 1948 he became commanding general of the 8th army in the far east and from July 13, 1950, led the U.S. ground forces in Korea under the over-all command of General MacArthur. Walker was posthumously promoted general.

Ward, Arnold Sandwith, British politician (b. Nov. 8, 1876—d. London, Jan. 1), was special correspondent of *The Times* in Egypt, the Sudan and India, 1899-1902. He was called to the bar in 1903, and was Unionist M.P. for West Hertfordshire from 1910 to 1918.

Warner, William Ward, British brigadier general and politician (b. 1867—d. London, March 21), became assistant adjutant general, Royal Flying Corps, in 1915. He was Conservative M.P. for Mid Bedfordshire, 1924-29.

Wavell, Archibald Percival Wavell, 1st Earl, of Cyrenaica and of Winchester, British soldier and statesman (b. Colchester, Essex, May 5, 1883—d. London, May 24), was educated at Winchester and at Sandhurst. He was gazetted to the Black Watch in 1901 and served in the South African war and later in India. He graduated from the staff college in 1910 and for a year learnt Russian. In World War I he served first on the western front where he lost his left eye, then in Russia as an attaché to the army of Grand Duke Nicholas, and later in Palestine. It was not until he was 47 that he was given his first independent command—the 6th Infantry brigade—and in 1935 took over the 2nd Infantry division. He visited the U.S.S.R. in 1936 to watch exercises of the Red army. In 1937 Wavell became commander in Palestine; in 1938 he was promoted lieutenant general and returned to Great Britain to take over Southern command, and in July 1939 went back to the middle east as commander in chief. After the entry of Italy into the war he launched an attack against the Italians in



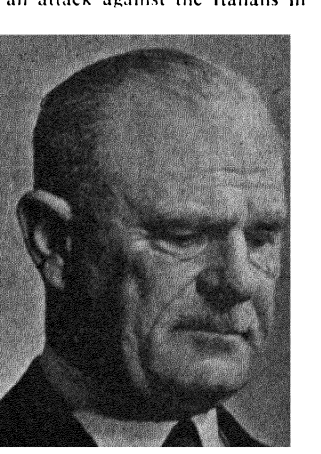
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Oliver Stanley



Guilhermina Suggia



Earl Wavell

north Africa on Dec, 9, 1940, and by Feb. 7, 1941, had all but annihilated their forces. At the same time he opened a successful campaign against the Italians in east Africa. In April 1941, however, his troops in north Africa were compelled by newly arrived German forces to retreat to the Egyptian border; in July he changed posts with General Sir Claude Auchinleck who had been commander in chief in India. On Dec. 28, 1941, he assumed command of the defence of Burma, and a week later was appointed supreme commander southwest Pacific. However, in March 1942, by which time the Japanese, who held the initiative throughout the short campaign, had obtained control of the whole of southeast Asia, Wavell returned to India. On June 19, 1943, he was appointed to succeed the Marquess of Linlithgow as Viceroy of India, where for four years he successfully undertook the preparatory work for a settlement of the Indian political problem. In Feb. 1947 he handed over to Viscount (later Earl) Mountbatten of Burma. In 1943 he was created a Viscount and in 1947 an Earl. He was appointed Constable of the Tower of London in 1948 and lord lieutenant of London in 1949. His writings—particularly on military subjects—were widely acclaimed. He wrote *The Palestine Campaigns* (1928), and later two volumes on his former commander, *Allenby* (1940), and *Allenby in Egypt* (1943). A series of essays *Generals and Generalship* appeared in 1941. He also made an anthology *Other Men's Flowers* (1944), and wrote *Speaking Generally* (1946) and *The Good Soldier* (1947), and for a time until Nov. 1949 was president of the Poetry society.

Wayland, Sir William Abraham, British politician (b. London?, Sept. 1869—d. Hythe, Kent, July 15), was knighted in 1920. He was Conservative M.P. for Canterbury, 1927-45, and chairman of the Empire Day movement, 1927-48.

Whitaker, Sir Cuthbert Wilfrid, British encyclopaedist (b. Enfield, Middlesex, May 26, 1873—d. Hampstead, London, April 4), succeeded his father, Joseph Whitaker, as editor of *Whitaker's Almanack* in 1895. He was chief commoner of the City of London in 1924 and was knighted in 1946.

Wiechert, Ernst, German writer and poet (b. Kleinort, near Sansburg, East Prussia, May 18, 1887—d. Uerikon am See, Switzerland, September), abandoned teaching soon after World War I and produced novels characterized by a romantic melancholy of which *Der Wald* (1922), *Die blauen Schwingen* (1925) and *Die Magd des Jürgen Doskocil* (1932) were examples. For speeches of warning to students against nazi rule in 1934 and 1936 and his protests against the imprisonment of Pastor Martin Niemöller in 1938 he was sent to Buchenwald concentration camp. His experiences there were described in *Totenwald* (1946).

Williams, (Arthur Frederic) Basil, British historian (b. London, April 4, 1867—d. London, Jan. 5), was educated at Marlborough and at New college, Oxford. After service in the South African War, he became secretary of the Transvaal education department, 1903-4, and special correspondent to *The Times* at the South African convention, 1908-9. During World War I he undertook refugee organization, and served in the army, 1915-19. He was Ford lecturer at Oxford in 1921, professor of history at McGill university, Toronto, Canada, 1921-25, and at Edinburgh, 1925-37. His most important work was a life of Chatham; he also wrote major biographies of Stanhope, Cecil Rhodes, and of Carteret and Newcastle. He was responsible for the fourth volume of *The Times History of the War in South Africa* and the 11th of the *Oxford History of England*, and contributed articles to the *Dictionary of National Biography* and *Encyclopædia Britannica*.

Wilson, Sir Samuel Herbert, British brigadier general and colonial administrator (b. Dublin?, 1873—d. London, Aug. 5), served in the South African War and in World War I. He was appointed governor of Trinidad in 1921, and in 1924 became governor in chief of Jamaica. In 1925, however, he became permanent under secretary for the colonies and as such visited at various times west Africa, east Africa and the Malay states. He was created K.B.E. in 1921, K.C.M.G. in 1923, K.C.B. in 1927 and G.C.M.G. in 1929.

Winlock, Herbert Eustis, U.S. Egyptologist and museum director (b. Washington, D.C., Feb. 1, 1884—d. Florida, Jan. 27), was director of the Egyptian expedition of the Metropolitan museum, New York, 1928-32, was curator of the Egyptian department, 1929-39, and director of the museum, 1932-39. His writings included an exhaustive account of *The Monastery of Epiphanius* (1926), two books on the temple of Rameses I, 1921 and 1937, *Materials used in the embalming of Tût-ánkh-Amún* (1941), and *Rise and Fall of the Middle Kingdom in Thebes* (1947).

Wood, Thomas, British composer and writer (b. Chorley, Lancashire, Nov. 28, 1892—d. Bures, Essex, Nov. 19), son of a master mariner, was educated at the Grammar school, Barrow-in-Furness, Exeter college, Oxford, and the Royal College of Music, London, where he worked with Sir Charles Stanford. In the period 1919-24, during which he edited volume II of the *Oxford Song Book*, he taught music at Tonbridge school. He was a lecturer and precentor at Exeter college, 1924-29. He travelled extensively in the Commonwealth and after a tour in Australia wrote *Cobbers* (1934) a study of that country and its people. He published his autobiography, *True Thomas*, in 1936. He was chairman of the music panel, Arts Council of Great Britain, from 1949. Most of his music was choral, much of it inspired by the sea; between 1925 and 1934 he wrote *Forty Singing Seamen*, *Master Mariners* and *Merchantmen*, forming a trilogy of cantatas. *Chanticleer* (1948) was an unaccompanied choral ballad and *The Rainbow* had for its theme the evacuation of Dunkirk. He also produced 60 smaller pieces for voices, piano, organ, etc. Latterly he had completed a choral work for male-voice choir and brass bands for the Festival of Britain, 1951.

Yen, Welching Williams (YEN HUI-CHING), Chinese statesman (b. Shanghai, April 2, 1877—d. Shanghai, May 23), held academic, journalistic and foreign office posts, 1900-13, and was a diplomat in Washington, Berlin, Stockholm and Copenhagen, 1913-18. He was foreign minister, 1920-22, (acting prime minister in 1921). During 1924-26 Yen was prime minister, also holding the portfolios of agriculture, commerce and the interior; in 1925-26, he also acted as foreign minister. He was minister to Washington, 1931-32, and was chief Chinese delegate to the League of Nations 1932-35; in 1933 it was his denouncement of aggression in Manchuria by Japan that led to the withdrawal of the latter from the League. He was ambassador to the U.S.S.R., 1932-36.

Young, Sir Arthur Stewart Leslie, 1st baronet, British politician (b. Glasgow?, Oct. 10, 1889—d. Benodet, France, Aug. 14), was Unionist M.P. for the Partick division of Glasgow, 1935-50, and for the Scotstoun division from Feb. 1950. He became Scottish Unionist and assistant government whip in 1941, was a lord commissioner of the Treasury, 1942-44, and vice chamberlain of H.M. household, 1944-45. He was created a baronet in 1945.

Young, Sir Hubert Winthrop, British colonial administrator (b. July 6, 1885—d. Evora, Portugal, April 20), was governor of Nyasaland, 1932-34, of Northern Rhodesia, 1934-36, and of Trinidad and Tobago, 1938-42. He was created K.C.M.G. in 1934.

OBSTETRICS: *see* GYNAECOLOGY AND OBSTETRICS.

OCEANOGRAPHY. Between June 6 and June 23, 1950, six research vessels from the U.S. and 50 scientists were engaged in an intensive investigation of the Gulf stream, the main purpose being to study the meanderings of the current between Cape Hatteras and the tail of the Newfoundland banks and to obtain detailed information about the complex flow-pattern believed to be typical of ocean currents. Walter H. Munk and Henry Stommel in the U.S. continued their theoretical studies; although they found that a balance existed between water movements caused by winds and changes brought about by differences of climate, they concluded that the surface currents were mainly caused by the winds. Ruth von Arx was developing an electromagnetic method of measuring the velocities of ocean currents. The method was likely to be more suitable for research purposes than for commercial application; it was expected to work best in deep water.

It was becoming generally accepted that the interchange of energy between the oceans and the atmosphere was an important feature in many meteorological as well as oceanographical problems. Later work was summarized by H. Charnock in *Science Progress* (London); he emphasized the need for a detailed investigation of the relation between the drag of the wind on the sea and the wind profile under conditions of different atmospheric stability. K. F. Bowden computed the seasonal variations in the exchange of heat and water vapour between the sea and atmosphere for the Irish sea.

At the laboratory of the Marine Biological Association of the United Kingdom, Plymouth, there was an increasing tendency to attribute the changes in available nutrient salts and the variations in productivity of the water in the English channel to vertical exchanges of water rather than to changes in the horizontal inflow of water from farther south or north. Particular attention was being paid to the probable effect of the greater cooling of the shallow water in winter, and its subsequent movement to a deeper layer beyond the continental slope and replacement by oceanic surface water. Other mechanisms which might contribute to vertical mixing were being studied by A. F. Spilhaus and A. R. Miller in the U.S. Bernhard Haurwitz gave a theoretical demonstration of the existence of internal waves of tidal period in the boundary layer that usually exists between shallow and deep water; his work suggested that such waves must contribute appreciably to the internal mixing in the oceans because the tidal streams in the upper and lower layers were likely to be in opposite directions, with sufficient shearing force to overcome the stabilizing effect of the stratification. There might also be interference between the internal waves and surface waves.

In the United Kingdom the King granted a charter to the National Oceanographic council which was to take over the working of the National Institute of Oceanography from the provisional executive committee which had been responsible for the first year's work. Papers published by members of

the institute in 1950 included accounts of theoretical and experimental work on waves; relations between waves and microseismic (ground) oscillations; and sea waves of 1 to 5 min. period. The German Hydrographic institute showed steadily increasing activity; among its publications were useful studies of the seasonal changes in heat content of the water of the English channel, and of ice conditions in the Arctic and Antarctic regions.

Samples of water taken very close to the sea bottom during the Swedish Deep Sea expedition (1947-48) were used as evidence that there are pronounced gradients in phosphate, silicate and turbidity within 20m. to 50m. of the bottom in deep basins. On submarine elevations such gradients were not observed. The difference was attributed to a tendency for laminar flow in the deep basins and for turbulent movements, which prevent the formation of sharp gradients, over the elevations. (G. E. R. D.)

OILS AND FATS, VEGETABLE AND ANIMAL: *see* VEGETABLE OILS AND ANIMAL FATS.

OMAN AND MASQAT: *see* ARABIA.

ORGANIZATION FOR EUROPEAN ECONOMIC CO-OPERATION (O.E.E.C.): *see* EUROPEAN RECOVERY PROGRAMME.

ORGANIZATION OF AMERICAN STATES. During 1950 the O.A.S., in addition to considering political, economic and legal problems affecting the nations of the western hemisphere, began to feel repercussions of events in other parts of the world. Following the action of the United Nations in the case of Korea in June, the council of the O.A.S. on June 28 approved a resolution declaring its firm adherence to the decisions of the U.N. In December, as the general international situation took a turn for the worse following Chinese Communist intervention in Korea, the U.S. requested that a meeting of foreign ministers of the American republics be held to consider questions relating to the defence of the Americas. This request was unanimously approved by the council of the organization and March 26, 1951, was fixed as the opening date of the meeting to be held in Washington.

A special meeting of the Inter-American Economic and Social council was held at the Pan American Union headquarters in Washington, from March 20 to April 10, 1950. The council decided to sponsor an O.A.S. technical assistance programme, utilizing the facilities of the Pan American Union and certain inter-American specialized agencies. A co-ordinating committee on technical assistance on which the co-operating agencies were represented drew up a programme comprising 46 projects which was presented to the council for action. Jan. 1, 1951, was fixed as the date for the initiation of the programme.

By the end of the year the following agencies had been declared specialized organizations under the terms of the charter signed at Bogotá, Colombia, in 1948: The Pan American Institute of Geography and History; the American International Institute for the Protection of Childhood; the Inter-American Institute of Agricultural Sciences; the Inter-American Commission of Women; and the Pan American Sanitary bureau. On July 1 the secretariat of the Inter-American Statistical institute was incorporated into the Pan American Union. The council also declared that the Inter-American Defence board should continue to function until the American governments by a two-thirds majority should consider its labour terminated.

Inter-American specialized conferences held during 1950 included the 2nd Inter-American Statistical congress which met at Bogotá, Colombia, from Jan. 16 to 27; the 13th Pan American Sanitary conference in Ciudad Trujillo, Dominican Republic, from Oct. 2 to 10; the 5th general assembly of the Pan American Institute of Geography and History at Santiago, Chile, from Oct. 16 to 20; and the 4th Inter-American Conference on Agriculture at Montevideo, Uruguay, from Dec. 1 to 12.

On Nov. 15, 1950, Hildebrando Accioly, representative of Brazil, was elected chairman of the council of the O.A.S. for the coming year, succeeding Luis Quintanilla of Mexico. (W. MR.)

ORTHODOX EASTERN CHURCHES. Since it was decided to defer until 1951 the celebration of the 19th centenary of St. Paul's arrival in Greece, the chief event in the Orthodox world in 1950 was, unhappily, a death: that of Patriarch Gavrilo (head of the Serbian Church since 1938 and a great national figure during World War II) which took place on May 8 (*see* OBITUARIES).

Vikentije Prodanov, bishop of Zlatovo-Strumica and acting bishop of Srem, was enthroned as the new patriarch of the Serbian Church on July 2. He had been elected by 33 votes, as against 25 for Bishop Arsenije Bradvarević of Montenegro and 2 for Bishop Damaskin Gardanicki. In interviews given to the press he declared that relations between Marshal Tito's government and the Orthodox Church were very good; but this was to be expected, as he had been the government's candidate. The election had originally been arranged to take place on June 10, but was postponed because of the somewhat mysterious failure of a quorum of the council of bishops to arrive: under the Church law of 1947 a new patriarchate could be elected only with two-thirds of the council present. Metropolitan Josip of Skoplje, generally regarded as the popular candidate for the patriarchate, was arrested on a charge of having taken part in a conspiracy to bring back the former King Peter; but he was later released, and the Orthodox Church in Macedonia, under him, was made independent of the patriarchate.

The process continued of separating from the Belgrade patriarchate all those Orthodox communities now within the political orbit of the Cominform, and transferring them to the jurisdiction of the Moscow patriarchate. Thus an autonomous church was established in Hungary at the beginning of the year; and, after the visit to Prague of a delegation from Moscow headed by Metropolitan Nikolay of Krutitsy, bishops were inducted in Czechoslovakia—one for Moravia, residing at Olomouc, and one for Slovakia, residing at Prešov, in addition to the bishop for Bohemia already residing in Prague (the patriarch of Moscow at the same time expressed the hope of setting up an autocephalous church in Czechoslovakia).

The patriarch of Moscow sent a telegram to the Security council of the United Nations at the beginning of September to protest against "United States aggression in Korea"; and it was not surprising when the Russian Orthodox in the U.S. announced on Oct. 14 that they were finally breaking all ties with Moscow and would in future work in independence. Metropolitan Joseph Krimovich was elected to be patriarch of the Russian Church in the U.S., and Metropolitan Konstantin Yaroshevich to be its representative elsewhere.

The Moscow patriarchate also supported the Stockholm peace appeal with vigour, calling on the Orthodox throughout the world for "a united effort on the part of the Orthodox Churches in the fight for peace against the instigators of war"; and this was followed up with a further statement from the patriarch, with which the patriarchs of the Georgian and Armenian churches were associated, to which the archbishop of Canterbury made a detailed reply in August.

Article III in the new constitution of the Syrian republic, passed in the constituent assembly in Beirut on Aug. 3, was a

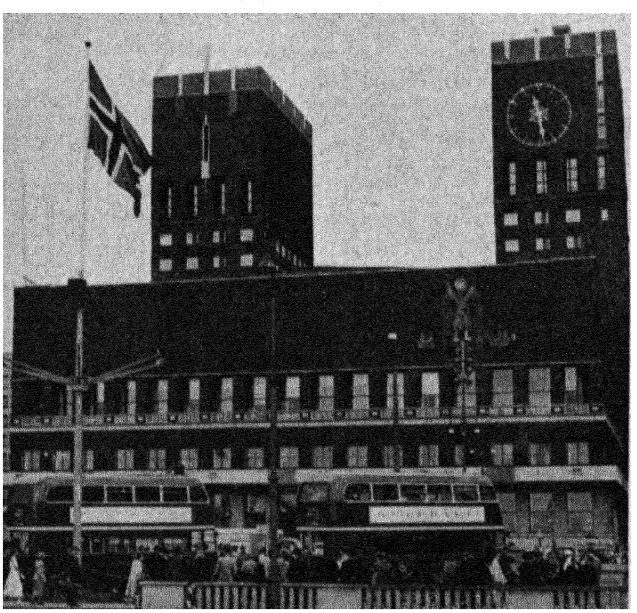
revised version which refrained from making Islam the state religion; in this and in the constitution's preamble the guarantees given to the Christians were the fruit of notable joint representations made by the Orthodox, Catholic and other Christian leaders.

The dispute between two sections of the Jacobite Syrian Church on the Malabar coast about the spiritual supremacy of the patriarch of Antioch, having lasted for some 40 years, was happily settled at the beginning of 1950. Mgr. Iwanis Youhanna Gandour, Jacobite Syrian metropolitan of the Lebanon and Damascus, was received into the Uniate Church in May by Ignatius Gabriel, Cardinal Tappouni, patriarch of Antioch of the Syrians.

The Russian Theological institute in Paris celebrated its silver jubilee on April 30. Archpriest Vladimir Theokritov, of the jurisdiction of the Moscow patriarchate, died at his Kensington home on July 10; he had lived in London since 1914. (M. Dk.)

OSLO, capital of Norway (known as Christiania from 1624 to 1925). Population: (1937 census) 272,496; (1950 est.) 450,000.

The 900th anniversary of the foundation of the Norwegian capital was celebrated in 1950. The city was bedecked for the occasion with flags and flowers, and numerous exhibitions were held to illustrate various facets of Oslo past and present. The main event was, however, the opening of the new town hall in the presence of representatives of many foreign capitals. It was an artistic as well as civic occasion, as the interior of the town hall had been decorated in a remarkably lavish way with murals covering a total area of over 10,000 sq.ft. The murals had been specially executed by a team of leading modern Norwegian artists including Henrik Sörensen, Per Krohg, Aage Storstein, Alf Rolfsen and Axel Revold. The interior contained also fine examples of contemporary tapestry-work and other forms of craftsmanship. The building itself, designed by Arnstein Arneberg and Magnus Poulson, was severely modern in its outward form, but included a number of decorative features. Along the covered approaches to the main entrance were ten large painted wood-carvings by Dagfin Werenskiold, which aroused much interest, while high above the entrance was installed Joseph Grimeland's large model of "The Oslo Girl." Many other pieces of statuary and reliefs decorated the outer walls, as well as cascades and fountains. In six months after the opening on May 15, the new town hall was entered and inspected by half a million Norwegian and foreign visitors.



The new town hall of Oslo opened in 1950—the 900th anniversary of the founding of the city. Two buses from London advertising the Festival of Britain 1951 can be seen in the foreground.

The opening of the restored cathedral church of Our Saviour on May 14 was also an artistic occasion. For the first time the public were able to view the immense ceiling paintings executed by Otto Lous Mohr. These paintings, illustrating biblical themes, made a particularly deep impression on critics. The rededication of the 250-year-old building was performed by the bishop of Oslo, Eivind Berggrav.

The anniversary celebrations in Oslo brought to the city the representatives of many cities in Norway and abroad, who conveyed congratulations and gifts to the mayor of Oslo, H. E. Stokke. On May 15 the guests were entertained at a luncheon in the ancient Akershus fortress, followed on May 16 by a grand ball in the town hall. May 17, Norwegian national day, was celebrated in Oslo by the usual children's procession and, in the evening, by a public festival in the Town Hall square with dancing, fireworks and other entertainments.

The international situation left its mark on Oslo with the announcement that air raid shelters would be built to hold, in the first building stage, 45,000 persons, and that the civil defence authorities were completing a plan for evacuating 135,000 of the city's population in the event of war.

(O. F. K.)

OSTEOPATHY. The progress of osteopathy in Great Britain was satisfactorily maintained during 1950. There was a steady increase in the number of students at the British School of Osteopathy and, as a result of the reorganization of the out-patient clinic attached to the school, it was possible to deal with more patients there. The number of treatments given in the clinic during the year was in excess of 20,000. In the previous few years a number of individuals and organizations had put up money to provide small scholarships for promising students who would otherwise have difficulty in taking the course. The latest addition to these was the gift of two annual scholarships to be financed by the Congress of Women's Co-operative Guilds. This was a most encouraging development.

The Earl of Mansfield retired from the presidency of the General Council and Register of Osteopaths, but the profession was fortunate in obtaining the services of the Hon. B. L. Bathurst in this capacity. The number of qualified osteopaths registered was 175. All practitioners reported an increasing demand for their services.

Much interest was shown among members of the profession in the new methods of cranial technique which had been studied for some time in the U.S. but had been much less widely known in Britain. A considerable proportion of the time at the annual post-graduate course was devoted to this subject and a number of practitioners acquired special facility in this work, which calls for a high degree of skill and a detailed knowledge of cranial anatomy. The development of this technique promised to enlarge very considerably the scope of osteopathic practice, as very encouraging results were obtained in a number of obscure and difficult conditions, including certain mental and nervous troubles, diseases of the central nervous system, sinusitis and hypertension. The results obtained with children and young persons by these methods seemed to be particularly important. (J. C. P. P.)

OXFORD UNIVERSITY. In the summer of 1950, 6,260 men and 1,062 women were in residence, the number of men being slightly higher and of women slightly lower than in 1949. The tendency continued for the proportion of scientists to expand and of those studying arts subjects to shrink.



Dr. John Lowe, dean of Christchurch and vice-chancellor of Oxford university, about to leave Oxford for Torquay, Devon, to address a conference, May 23, 1950.

The new college, named St. Antony's college, for the foundation of which Antonin Besse gave £1,250,000 in 1948, began to function at the beginning of the academic year 1950-51. It was housed in a building on the Woodstock road which was originally an Anglican convent. In 1945 it was bought by the university as a club with residential facilities primarily for senior members of the university staff and postgraduate students. That activity was transferred to premises situated conveniently near to the science laboratories. F. W. D. Deakin, formerly fellow of Wadham, was the first warden.

The Oriel professorship of the interpretation of Holy Scripture was severed from the canonry at Rochester, with which it had been held in conjunction since 1883. The combined duties had become too heavy for one man. The Nolloth professorship of the philosophy of the Christian religion hitherto had been restricted to communicant members of the Anglican Church or a church in communion with it. This sectarian restriction was removed. Emergency arrangements made during World War II for medical students to do their clinical training in Oxford were afterwards made permanent. In 1950 the clinical part of the school was full and there were more applicants than places. The great increase of interest in musical studies and the recognition that music provided a discipline that made it a suitable subject of study for undergraduates led the university to establish an Honour School of Music leading to the degree of B.A. The Honour school would give a thorough grounding in the history and theory of music. The bachelor of music degree would, in the future, be an advanced professional degree. The new Imperial Forestry institute, erected at a cost of upwards of £175,000, which was the centre of forestry studies for the British Commonwealth, was formally opened by Princess Margaret on Oct. 19. The Nuffield foundation gave £100,000 for the permanent endowment of two additional fellowships at Nuffield college.

The following professorial changes occurred during the year: geology, L. R. Wagner succeeded J. A. Douglas; economic history, H. J. Habakkuk succeeded W. K. Hancock; modern history (Chichele), E. F. Jacob succeeded K. G. Feiling; fine art (Slade) Ernst Gombrich succeeded Sir Kenneth Clark; moral and pastoral theology, V. A. Demant succeeded R. C. Mortimer (appointed bishop of Exeter); French literature, Jean Seznec succeeded G. Rudler.

During the year the university lost, by death, the services, amongst others, of two fellows of Merton, A. G. Gibson, a distinguished physician and specialist, and H. O. Newboult, its mathematical tutor. Mathematics was further hit by the death of E. A. Milne, the Rouse Ball professor. John Ryle, the professor of social medicine, died within a few weeks of resigning, and Battiscombe Gunn, the professor of Egyptology, died in mid-career. The veteran of all college tutors, William Nelson Stocker, of Brasenose, died at the age of 98, having been a fellow of the college for 72½ years.

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PACIFIC ISLANDS, BRITISH. Colonies and protectorates administered by the high commissioner for the western Pacific. The principal are: (colonies) Fiji (*q.v.*), Gilbert and Ellice Islands; (protectorates) Solomon Islands, Tonga; (Anglo-French condominium) New Hebrides (*q.v.*).

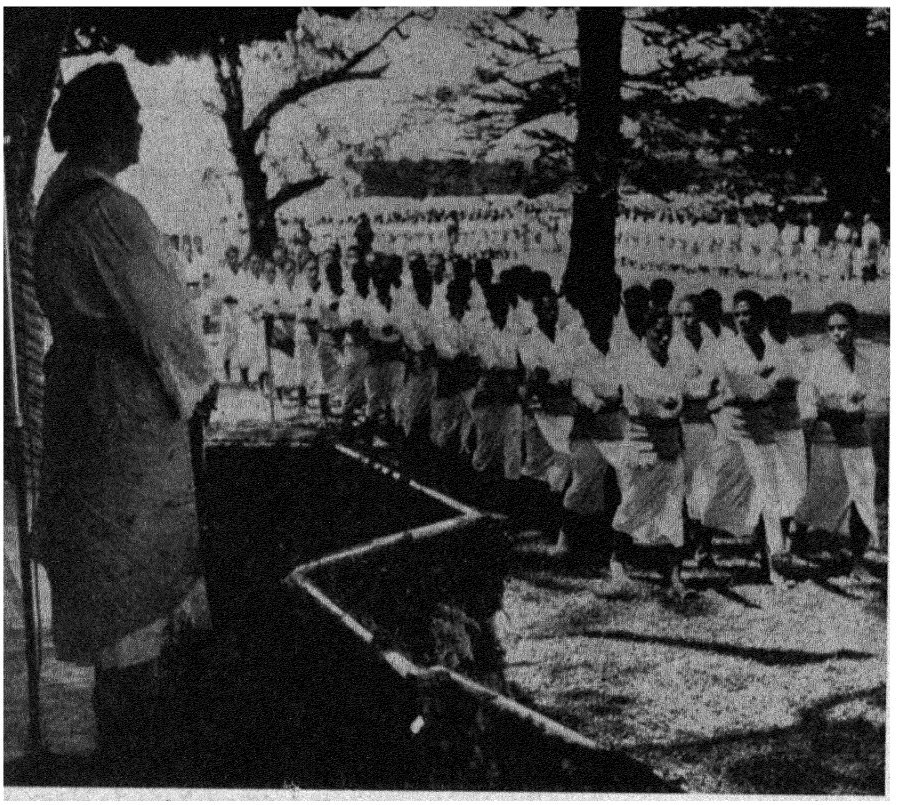
	Area (sq.mi.)	Population (1937 est.)	Population (1947 est.)
Gilbert and Ellice Islands	375	34,000	36,000
British Solomon Islands	11,000	94,000	95,000
Tonga	250	34,000	46,000
	11,625	162,000	177,000

Population: Gilbert and Ellice Islands, Micronesian with a Polynesian minority; British Solomon Islands, Melanesian; Tonga, Polynesian, akin to Maori and Samoan; European, G.E.I. 304, B.S.I. 118, Tonga 304. Religion: mainly Christian except in the British Solomon Islands. Administration: resident commissioners, agents or administrative officers are appointed by the high commissioner; Tonga is governed by the sovereign, with a cabinet and a Legislative Assembly. High commissioner for the western Pacific and governor of Fiji, Sir Leslie Brian Freeston (*see* FIJI); Resident commissioners: Gilbert and Ellice Islands, W. J. Peel; British Solomon Islands, H. G. Gregory Smith. Tonga: ruler, Queen Salote Tupou (*q.v.*); British agent and consul, J. E. Windrum.

History. Except for Tonga these islands were administered directly by the governor of Fiji in his capacity as high commissioner for the western Pacific islands, there being no local legislatures. Tonga, however, under a constitution granted in 1875, had its own privy council and cabinet, presided over by Queen Salote, a Legislative Assembly, and its own judiciary, the protective power being represented by an agent. The Queen was educated in New Zealand and her son Prince Tugi, who was prime minister, was a graduate of Sydney university. Her government had for many years been enlightened and progressive. On March 13, 1950, the Queen who had reigned for 32 years celebrated her 50th birthday.

On Pitcairn Island, which was inhabited by the descendants of the mutineers of the " Bounty," a representative of the high commissioner took back to the island the original Bible which had belonged to Captain Bligh of the " Bounty " and had been taken ashore there by the mutineers. This Bible was discovered in the U.S. and had been given back by its owner to the islanders through the British government. In the Solomon Islands the nativistic movement known as " marching rule " continued to lose ground during the year in consequence of firm handling by the government and of an acceleration in the development of social services, including education and the co-operative movement.

For all the islands the most significant event of the year was undoubtedly the visit of all their representatives to the South Pacific conference in Suva (*see* SOUTH PACIFIC COMMISSION). The native copra trade, helped by high prices, continued to



Queen Salote Tupou of Tonga reviewing a march past on the occasion of her 50th birthday, March 1950.

prosper, recovery from the destruction of war being particularly marked in the Solomons. Progress was made in the Solomons with the building of the new capital at Honiara and the opening of the first government boarding school at Auki.

Finance and Trade. Currency: in the Solomons, Gilbert and Ellice Islands and Tonga, the British and Australian currencies are legal tender, though Tonga issues its own notes, and in all these territories the exchange standard system is based on Australian currency; in the New Hebrides sterling and French currency are both legal tender. (£A 125=£100 sterling).

	Revenue (1950 est.)	Expenditure (1950 est.)	Imports 1949	Exports* 1949
Solomon Islands	£A 536,581†	£A 536,581	£A 450,063	£A 582,262
Gilbert and Ellice Islands	£A 393,268‡	£A 393,268	£A 124,779	£A 283,967
Tonga	£A 302,000§	£A 323,243§		
New Hebrides‖	£150,000	£220,000		

* Incl. re-exports. † Incl. grant-in-aid £A204,588. ‡ Incl. grant-in-aid £A 101,610. § 1949-50 est. ‖ Condominium only, British and French administrations have supplementary budgets.

Principal exports: phosphates (Ocean Island) and copra.

(K. G. B.)

PACIFIC ISLANDS, FRENCH. Two former French colonies, the status of which was changed in 1946 to that of overseas territories, and the Anglo-French condominium of the New Hebrides (*q.v.*). Areas and populations:

	Area (sq.mi.)	Population (1936 census)	Population (1946 census)
New Caledonia and dependencies	7,654	53,245	61,250
French Settlements in Oceania	1,545	43,962	55,734

Population, New Caledonia proper (6,533 sq.mi.) and the dependencies: Melanesian with Polynesian admixtures; Europeans (1946) 18,737, mostly French; 8,600 Javanese; 4,100 Annamese immigrants. Nouméa (pop., 1946, 10,466) is the seat of the commissioner general for the Pacific ocean, Pierre Cournarie.

The Etablissements Français de l'Océanie consist of the Society Islands (the largest of which is Tahiti), the Marquesas, Tuamotu and other smaller islands. Population: Polynesian, majority Christian; Europeans (1946) 1,700, including 900 French and 500 British; also 6,390 Chinese immigrants. Papeete, or Tahiti island (pop., 1946, 12,428), is the seat of the governor, René Petitbon.

History. Agricultural activity in New Caledonia was shown in a 1950 survey to be concentrated mainly on coffee (5,000 ha.), coconut palms (3,500 ha.), tuber and rhizome crops (1,600 ha.) and bananas (1,000 ha.). Too little space was given to maize (500 ha.) and the coffee yield was poor. Backed by the Equipment plan, the council could apply Fr.C.F.P. 100 million to its programme, already in progress, for social and occupational betterment. Grants were awarded by the same assembly enabling the 15 best pupils of the *collège* of Nouméa to spend three weeks in Australia. Important debates by the Assembly of the French Union at Versailles concerned the composition and competence of a representative territorial assembly for New Caledonia. By 103 votes to 19 the Assembly decided in favour of a single electoral college and universal suffrage. In January the fourth session of the South Pacific Commission (*q.v.*) at Nouméa was attended by 21 representatives of Australia, France, the Netherlands, New Zealand, the United Kingdom and the United States.

The other French settlements in Oceania are also agricultural lands largely devoted to copra and vanilla which represent 72% of the exports. Nevertheless 60% of the food requirements were covered by imports. The government therefore concentrated on developing food cultivation and fruit crops for export. In 1949 some 4,300 grapefruit trees were planted. The building industry, long paralysed by lack of materials, made a vigorous start in 1950, notably at Papeete. For the ten-year plan for the economic equipment of the territory, a sum of Fr.C.F.P. 1,277·5 million was allocated by the F.I.D.E.S. (*See* FRENCH UNION.)

New Caledonia. *Agriculture.* Main crops (1949, metric tons): rice 700; maize 1,000; cassava 2,500; sweet potatoes 4,000; potatoes 1,100; groundnuts 1,200; copra 1,900; coffee 800. Livestock (1949): cattle 94,000; sheep 6,000; goats 7,000; pigs 11,000.

Mineral Production. (1949, metric tons): nickel ore 93,900; nickel mattes 4,000; chrome 88,800; gypsum 17,100.

Foreign Trade. (Million francs C.F.P., 1949; 1950, six months, in brackets) imports 711·3 (396·2); exports 426·1 (185·9).

Transport and Communications. Roads (1946): 4,021 km. Ships entered (1949) 602; cargo ('000 metric tons): unloaded 279·6; loaded 229·7; passengers carried: arrivals 1,803; departures 1,969.

Finance. Budget (1950 est.) balanced at Fr.C.F.P. 334·9 million.

French Settlements in Oceania. *Agriculture.* Main crops (1949 est., metric tons): maize 300; cassava 400; taros 10,000; copra 28,600.

Mineral Production. Phosphate rock (1949) 265,000 metric tons.

Foreign Trade. (Million francs C.F.P., 1949, 1950, six months, in brackets) imports 589·6 (262·7); exports 472·3 (216·6). Main exports (1949, metric tons): phosphate rock 239,532; copra 25,123; vanilla 294.

Transport and Communications. Shipping, cargo carried (1949, Tahiti and Makatea, metric tons): unloaded 55,800; loaded 218,500.

Finance. Budget (1949 actual) balanced at Fr.C.F.P. 159·5 million. Monetary unit: franc C.F.P. (Colonies Françaises du Pacifique)= M.Fr. 5·50.

(C. A. J.)

PACIFIC ISLANDS, U.S. Under this heading are grouped the possessions and trust territory of the United States in the Pacific. Area: 969 sq.mi. Pop. (1950 est.): 132,100.

Samoa, American. The Samoan Islands are 2,200 mi. S. of the Hawaiian Islands. American Samoa consists of six

inhabited islands and a coral atoll. Area: 76 sq.mi. Pop. (1950 est.): 18,602, four-fifths on Tutuila. Samoans are Polynesians and predominantly pagan with important Christian minorities. Pago Pago, on Tutuila, is the capital. Governor, Capt. Thomas F. Darden, Jr., U.S.N.

Administration was to be transferred to the jurisdiction of the Department of the Interior on July 1, 1951. In contemplation of this change, the U.S. naval station at Tutuila was disestablished on Dec. 31, 1949, and replaced by a naval government unit.

Education. In 1950 there were 5,093 children enrolled in public and private schools, with a total of 161 teachers.

Economy and Finance. Main crops (1950, metric tons): copra 2,403; breadfruit 7,000; bananas 19,492; taro 2,900. Foreign trade (1949-50): imports $886,961; exports $313,070. Budget (1949-50): revenue $407,713 in addition to a U.S. government appropriation of $55,000; expenditure $661,143.

Guam. The largest and southernmost island of the Marianas, lying in the Pacific about 5,100 mi. W. of San Francisco and 1,500 mi. E. of Manila. Area: 206 sq.mi. Pop. (June 30, 1950): 27,985 Guamanians and 30,769 others. The Guamanians are Chamorros, of mixed blood, and their religion is predominantly Roman Catholic. Agaña is the principal city and capital. Governor, Carlton Skinner.

The U.S. Department of the Interior took over the administration of the island from the navy on Aug. 1, 1950.

Education. In 1950 there were 21 elementary and junior high schools and 1 high school with a total of 9,829 pupils and 317 teachers.

Economy and Finance. During the fiscal year 1949-50 expenditure amounted to $4,222,479, of which $560,755 came from U.S. appropriations and the balance from local revenues. In the year 1949-50 imports totalled $8,188,175 and exports $644,452. There are no railways, but five military airfields.

Marshall, Caroline and Mariana Islands. These islands, German colonies before World War I and Japanese mandated territories between the two world wars, constituted (with the exception of Guam) the U.S. trust territory in the Pacific. The territory contains 96 distinct island units of which 64 are inhabited, with a combined land area of about 687 sq.mi. Truk in the centre of the territory is 4,391 mi. W. of San Francisco and 1,832 mi. E. of Yokohama. Total resident population (June 30, 1950): 54,843; they are Micronesians and three-fifths of them live on Saipan, the Palaus, Yap, Truk, Ponape and Majuro. High commissioner, Admiral A. W. Radford.

The U.S. occupied many of the islands during World War II and received a trusteeship over the territory from the United Nations in 1947. The territory was divided into five administrative districts: Saipan, Palau, Truk, Ponape and Marshall Islands, all administered by the U.S. navy.

Education. On March 31, 1950, there were 140 public schools with 275 teachers and 7,562 pupils and 14 mission schools with 63 teachers and 1,439 pupils.

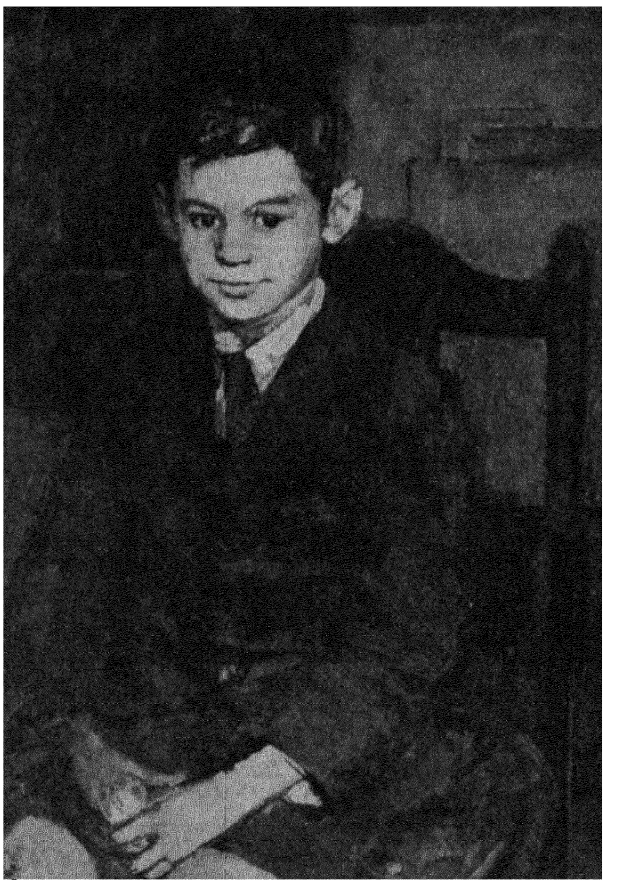
Economy and Finance. During fiscal year 1950-51 revenue was estimated at $310,000 and U.S. appropriated funds totalled $1,014,000. Production in 1949-50 (short tons); copra 9,909; phosphate rock 148,215. Foreign trade (1949-50): exports $1,643,000; imports $1,348,000. (S. NR.)

PACIFIC ISLANDS UNDER TRUSTEESHIP:

see TRUST TERRITORIES.

PAINTING. The outstanding characteristic of European mid-century painting was the absence of any central core of tradition; this had by 1950 dissolved into a multiplicity of personal influences. If any one aspect predominated, it was the demand for organization within the confines of the canvas. Two forms of organization emerged most clearly: the arrangement of entirely non-representational forms and the attempted reconciliation of the abstract with the evident.

Exponents of abstract or near-abstract painting practising in France and Italy produced work which, without the stimulus of nature, tended to become increasingly sterile and



"Portrait of a Boy" by Ruskin Spear, exhibited at "The Observer" exhibition of children in art, London, 1950.

artificial through artistic inbreeding. André Masson, Louis Soulages and Hans Hartung were the acknowledged leaders of French formalistic painting with A. F. del Marle, Gérard Schneider and J. Gorin deriving from Piet Mondrian's rigorously geometrical designs, and Léon Gischia, Jacques Villon and Edouard Pignon among those stemming from Pablo Picasso's many phases. Villon's "La Faucheuse" earned him the Carnegie prize for 1950.

In Great Britain Ben Nicholson remained the most consistent exponent of geometrical planning of the canvas, with John Tunnard, Peter Lanyon (of the Cornish group) Prunella Clough and Victor Pasmore (a recent convert to pure formalism) carrying their work in various degrees towards complete abstraction.

A significant tendency in France was a revival of the ideas of Paul Klee re-edited to fuse with the achievements of Impressionism. Francisco Borès, Maurice Estève and Jean Louis Roux were among the leaders of this movement with Raoul Ubac and Pierre Pallut as close followers. Surrealism found a French voice in Jacques Hérold, a Belgian in Paul Delvaux (nudes in formal gardens), and a British sympathizer in Lucian Freud. Picasso reappeared with some Provençal paintings and other works, rather a display of virtuosity than the announcement of a new "period," while Marc Chagall continued to explore his world of whimsical fantasy.

More acceptable to many was the work achieved in England by those regarding abstraction as an essence to be distilled from the evident, not a condition to be imposed on it. Ivon Hitchens and Graham Sutherland continued to be the leaders of this imaginative company, the first with his lyrical abstractions and the second with the dramatically integrated forms of his compositions. Hitchens' now annual exhibition was devoted not to landscapes as hitherto, but to nude studies

which showed that his abstract ideas regarding colour as an interpreter of spatial relationships were as applicable to the human form as to landscape.

A greater degree of naturalism was remarked in the paintings of Robert Colquhoun, William Scott, John Minton (a Spanish series) and Keith Vaughan. These artists, organizing their designs for the most part as flat patterns, retained their individual styles restrictive as was their idiom.

British allegiance to French contemporary art seemed to diminish while the influence of an earlier generation of French painters remained pervasive and fruitful. Thus Patrick Heron (who showed an imaginative portrait of T. S. Eliot) generally acknowledged derivation from Georges Braque; Geoffrey Tibble from Edgar Degas; Edward Le Bas, Henryk Gotlib, Z. Ruszkowski and Max Chapman from Pierre Bonnard; and John Napper from Paul Gauguin and other sources. Ceri Richards's rhythmic paintings in sonorous colour were as clearly influenced by Henri Matisse. William Coldstream developed, with the Euston Road group which he helped to found, an important British variant of the manner of Paul Cézanne and the Impressionists.

The element of intensified humanism found support in France in a revival of German Expressionism and in Great Britain in the sombre work, devoted to the mining community, of Josef Herman, leader of a Welsh group, as well as in the industrial scenes of L. S. Lowry of the Manchester group.

Of artists wholly individual in style and outlook Stanley Spencer (*q.v.*) completed his great vision of the Resurrection, crowded with curious detail, which was the outstanding work of the year's Royal Academy. Even more enigmatic, Francis Bacon seemed to symbolize in his sensational canvases, painted with a technical brilliance which recalled Velasquez, the frustration of modern man in a nightmare world. Dame Ethel Walker maintained in her 83rd year almost the freshness of youth, and among the younger serious painters who lent authority to the Academy were Rodrigo Moynihan and Ruskin Spear.

Meanwhile economic conditions exacted their toll of talent by forcing many artists into more remunerative tasks. The deaths occurred of John Copley (*see* OBITUARIES) and of his wife the painter Ethel Gabain.

Theatrical and ballet décor enjoyed some prosperity, foremost in the British field being Leslie Hurry ("Hamlet" and "King Lear"), Graham Sutherland, Edward Burra ("Don Quixote") and John Piper ("The Quest"). In France Antoni Clavé undertook the décor for "Ballabile."

In Italy the *Novecento* group (Arturo Tosi, Felice Casorati, etc.) lost ground to the *Fronte Nuova delle Arti* which, dedicated to "social realism," or the criticism of social conditions from a left-wing point of view, adopted less realistic methods than are usually implied, especially in Russia, in this attitude. Renato Guttuso, who exhibited in London, showed his deep rooted sympathy with the humblest Sicilian life in his firmly designed paintings.

Painting in Germany, still harassed by political conditions, relied for inspiration on its expressionist past but struggled at the same time, under the guidance of such prewar leaders as Karl Schmitt-Rottluff, to regain a place in the cultural sun.

In the republic of Ireland, Colin Middleton's paintings (usually landscapes with figures) showed that, havine abandoned his earlier near-surrealist meticulousness in the use of paint, he had developed instead a disciplined freedom of handling; and the dramatic religious paintings by Belfast-born Daniel O'Neill showed that he was a remarkable young romantic artist steeped in the old masters' tradition.

Belgium revealed a distinguished painter in Constant Permeke whose solidly realized figure paintings made a mark on the international scene when exhibited in London and Venice. (N. A. D. W.)

United States. In the United States, 1950 was marked by the rapid spread of abstract painting. The Metropolitan museum, New York, inaugurated a new policy of showing modern art annually. The choice of the jury for the first exhibition seemed to threaten the cause of abstraction and was boycotted by a group of leading *avant-garde* painters. When the exhibition opened, however, the abstract trend was again dominant. The issue seemed no longer between abstract and representational idioms, but rather how to distinguish work of high quality from "academic" abstractions or superficial daubing. The usual criteria seemed increasingly inadequate and Europe no longer seemed able to provide guidance. Controversy centred around such artists as Jackson Pollock, Arshile Groky, William De Kooning and Robert Motherwell, who were strongly supported by the Museum of Modern Art.

Another controversy during the year, regarding the genuineness of a supposed Van Gogh self-portrait owned by William Goetz of Los Angeles, was settled by a precedent-making decision of the U.S. treasury department's bureau of customs. After a jury of experts was unwilling to accept the picture as an original, the Port of New York Customs authority made a surprisingly competent investigation of the painting and authenticated it.

One of the most important conferences of the year brought together painters and museum directors at Woodstock, New York, with a result which promised greater museum support of living artists. The magazine *Life* made a contribution to contemporary painting by collecting an exhibition of



"Figure by a Window, 1950" by Ivon Hitchens, which was exhibited at the Leicester Galleries, London.

young American painters (under 36), which was shown at the Metropolitan museum and part of it published in *Life*. Universities, particularly in the middle west, continued to present major exhibitions of modern art, but support of contemporary painting by big industries, through exhibitions and prizes, largely ceased.

At the Venice *Biennale* the United States contribution stressed John Marin. The Mexican contribution of one-man shows by four major artists, David Siqueiros, José Orozco, Diego Rivera and Rufino Tamayo, attracted much attention. (*See* also ART EXHIBITIONS; ART SALES; DRAWING AND ENGRAVING; MUSEUMS.) (L. D. L.)

PAINTS AND VARNISHES. During 1950 the British paint and varnish industries continued their efforts to expand their sales abroad in spite of adverse external circumstances. By the end of 1950 the total exports of paint and allied products were expected to be about the same as in 1949, though considerably below the value of the peak figure of £8,193,000 in 1948.

The Korean war and rising world raw material prices had their inevitable effects on the paint industry. The increasing of the tax on light industrial oils under the budget in April imposed a heavy new burden on the industry. Towards the end of the year there were many instances of advances in the prices of pigments, resins, dyestuffs and printing-ink oils and also of linseed oil and varnishes.

The allocation scheme for linseed oil was discontinued from July, and from that date the Ministry of Food made supplies of raw oil available to processers with permits. On the other hand tung oil became more difficult to obtain because of the unsettled conditions in China.

The first meeting of the technical committee for raw materials for paint of the International Organization for Standardization was held during the year in Zürich: a number of draft specifications were provisionally accepted for certain raw materials.

On the technical side of the industry a considerable amount of research was carried out by official and semi-official bodies on the prevention of corrosion, and a new "weather-meter" was designed to promote the investigation of the stability of finishes under weathering. Interest was also aroused in the use of aluminium alcoholates in surface-coating compositions, in the development of plastic spray packaging and in the use of special printing inks in the production of printed electronic circuits.

Fluorescent printing inks appeared for the first time in Britain. Their brilliance was achieved by the incorporation of a fluorescent pigment on a reflective background.

Several new plants opened in Britain during the year issued products of interest to the paint industry: Hess Products Ltd. completed a plant at Littleborough in Lancashire for producing fatty acids by a fractionation process and Cabot Carbon Ltd. at Ellesmere Port in Cheshire and Philblack Ltd. at Avonmouth, Bristol, installed carbon black manufacturing plants.

Considerable developments towards improving the three leading white pigments took place in 1950, and attention was paid to anti-corrosives of the zinc chromate type. Cadmium pigments were also developed, principally to the advantage of the plastics industry. Pigmentary organic dyestuffs, notably the phthalocyanines, were likewise not neglected. (E. N. T.)

PAKISTAN. Self-governing member of the Commonwealth of Nations, a federation of provinces, Baluchistan, East Bengal, North-West Frontier Province, Sind and West Punjab.

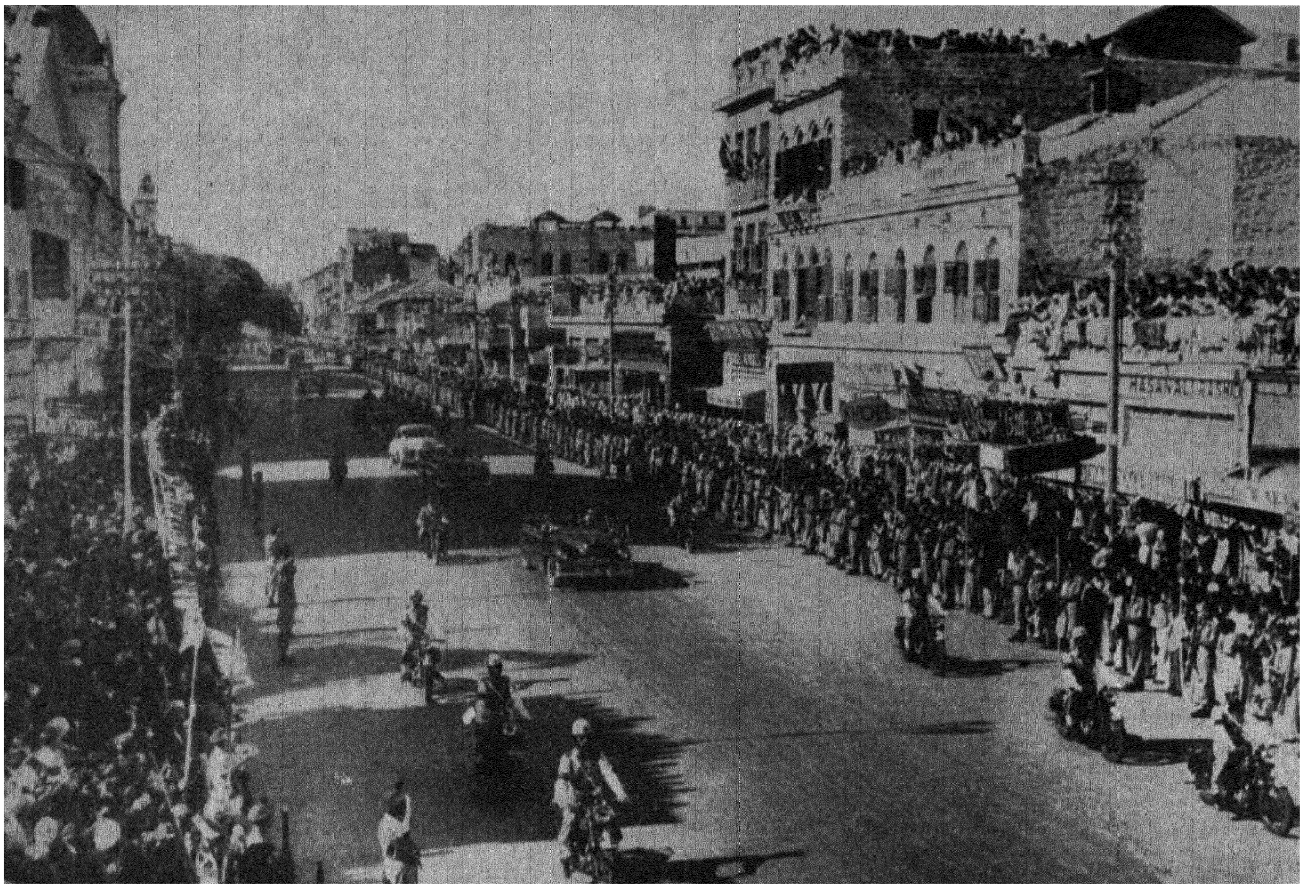
Pop. (March 1, 1950, est.): 75,000,000. Language: Urdu, Punjabi, Baluchi and Pashtu in West Pakistan and Bengali in East Pakistan; English used as a medium of instruction in higher education. Religion: Moslem (72·9%); Sikh, Hindu, Christian, Parsee and other minorities. Chief towns (pop. 1941 census): Karachi (*q.v.*, cap., 359,492; 1948 est. *c.* 1,000,000); Lahore (671,659; 1948 est. *c.* 1,000,000); Dacca (213,218); Rawalpindi (181,169); Multan (142,768); Sialkot (138,348); Peshawar (130,967). Constitution: governor general; federal executive of a cabinet of ministers answerable to the legislature; Constituent Assembly elected on the basis of one member for every million inhabitants which was also the federal legislature. Provincial administration (except Baluchistan administered by a chief commissioner): governor; ministry responsible to a provincial legislature. Governor general of Pakistan, Khwaja Nazimuddin; prime minister, Liaquat Ali Khan (*q.v.*).

	Area (in sq.mi.)	Population (1941 census or est.)
Sind	48 136	4,535,000
West Punjab	62,100	15,800,000
North-West Frontier Province:		
(a) administered area	14,200	3,038,067
(b) tribal area	24,986	2,500,000
Baluchistan	134,002	857,835
Total, West Pakistan	283,424	26,730,902
East Pakistan (East Bengal)	54,100	41,880,000
Total	337,524	68,610,902

History. *The Islamic Conference.* The leading event at the close of 1949 had been the International Islamic conference which opened at Karachi on Nov. 25. In the words of the finance minister, Ghulam Mohammed, the chief aim of the conference was to help all Moslem countries to get together in the economic field. Shortly after, in the Constituent Assembly at Karachi he announced that, in order to give effect to its recommendations, Rs. 10 million would be set aside. The matter was again taken up at the all-Pakistan Science conference held in April 1950, when the governor general announced that his government contemplated an expenditure of £320 million on nation-building schemes during the next ten years. Further evidence of the growing unity between Moslem nations was provided by an improvement of relations with the Afghan government, and by the visit to Karachi on March 1 of the shah of Persia. He afterwards flew to Dacca, the capital of East Pakistan, and was everywhere accorded a royal welcome. He spoke of Persia as a link between east and west.

The Prime Minister's Tour. At the end of April the prime minister, Liaquat Ali Khan, set out on a prolonged tour of the U.S. and Canada. His absence was made possible by the fact that shortly before leaving he had signed an agreement with Jawaharlal Nehru, the Indian prime minister, about the status of minorities and the protection of their rights and property. This had led to a notable easing of the tension between the two states. The chief object of his visit was to enable the great western democracies to obtain a clearer understanding about what Pakistan stood for, and the odds against which it had to struggle. On his arrival at New York, he was met by Harry S. Truman, president of the U.S., and on May 4 he addressed the House of Representatives. Other engagements included visits to the U.S. Naval Academy and the great commercial centres of Chicago and Pittsburg. In Canada, he was the guest of the governor general, and addressed the Canadian houses of parliament. On his way home, he was entertained by the British government.

Relations with India. Relations with India still left much to be desired, though some of the causes of disagreement were temporarily settled by the Delhi pact (*see* INDIA). On the other hand, widely felt resentment was aroused by the



Citizens of Karachi welcoming the Shah of Persia in March 1950 during his state visit to Pakistan.

failure of Sir Owen Dixon (*q.v.*), the mediator appointed by the Security council, to reach an understanding over Kashmir (*q.v.*). It was felt that Sir Owen Dixon's report, by recommending that the two countries should be left to settle the matter by mutual agreement, had struck a serious blow at Liaquat Ali Khan's policy of support for the United Nations and co-operation with the Commonwealth and western powers.

Apart from the political and religious aspects of the question, Kashmir was vital to the existence of Pakistan on account of the water supply. The six rivers necessary to her economic life, and irrigating some 20 million ac., all rise beyond Kashmir's northern or eastern frontiers. India was contemplating a scheme which would divert the Sutlej river to irrigate areas required for the settlement of Hindu and Sikh displaced persons, and if it obtained domination over Kashmir and Jammu, a similar situation might well have arisen over the Indus, Jhelum and Chenab. Water was the life-blood of West Pakistan and its control by a hostile neighbour would mean ruin.

What water was to the Punjab, jute was to East Bengal. Of the total world yield of jute 75% was grown in the Brahmaputra and Meghna valleys, and the acreage under jute was under the control of government, which fixed the annual quota in order to prevent profiteers from devoting to it land which would otherwise be planted with rice, the staple food of the country. At the root of the trouble with India over jute was the devaluation of the rupee. Here India had followed the United Kingdom and the other Commonwealth countries with which its economy was closely bound. Pakistan, on the other hand, saw no reason for taking such a step. It had a favourable trade balance and feared that devaluation could lead to inflation. The jute from East Bengal was processed in Calcutta for export and the dispute which arose over prices led to the hold-up of 300,000 bales. India retaliated by stopping the supply of coal, which Pakistan regarded as a violation of the inter-dominion agreement.

The East Bengal government strove to meet the situation by the use of oil for coal, by importing coal and by exporting raw jute direct to countries abroad; but Chittagong, the only port, was deficient in modern appliances and quickly became a bottleneck. Trade between the two states came to a standstill, and railway communications were interrupted to such an extent that tea and other commodities from Assam could only reach Calcutta by a special link-line. In Calcutta, mills were closed and unemployment led to fresh outbreaks of communal rioting. The disastrous migrations which had been successfully dealt with two years previously started again and threatened to reach unmanageable proportions.

Fortunately the seriousness of the situation was realized in time by the leaders of both countries. After correspondence on the subject Liaquat Ali Khan journeyed to Delhi and opened conversations with Nehru with a view to reaching a mutual understanding. Arrangements were made for the supply of 300 million pounds of raw jute by Pakistan, in return for an equivalent supply of manufactured goods by India. In a joint declaration, the prime ministers expressed their determination to punish rioters, recover looted property, protect minorities and provide facilities for intending refugees while discouraging large-scale migrations. A joint tour of the affected districts in Bengal by the minority ministers, which lasted for 13 days, had also a remarkable effect in restoring confidence (*see* INDIA).

There was, however, ground for further improvement. In July there were still over a million Moslem refugees from India in Pakistan, and two million Hindus from Pakistan in the United Provinces. In October, Jogendranath Mandal, Hindu member for law in the Pakistan government, resigned

as a protest against the non-observance of the Delhi pact. Another unofficial dispute with India was over the question of sterling balances. Pakistan complained that it had not received its share of the assets due to it after the partition.

Economic Progress. In February an industrial mission from the United Kingdom visited Pakistan to explore and report on the steps that might be taken between the two countries to facilitate the flow of trade in both directions and assist the planning and execution of the schemes that the government was undertaking for the economic development of the country and the expansion of its trade. The mission reported favourably on the progress made in the past two years. In food grains the country was self-supporting, and the export trade to the United Kingdom in jute, raw cotton and tea had trebled. In the first half of 1950 it amounted to £34,250,000. In October members of the World Bank mission arrived to discuss the government's application for a loan of £80 million for industrial expansion. Pakistan's strength lay in the fact that, unlike India, it was untroubled by internal dissensions. Communism hardly existed, and the only political party was the Moslem league. The chief obstacles were the dearth of trained administraters, the dislocation of trade with India and the crushing burden of military expenditure in Kashmir. For the Plan for Co-operative Economic Development in South and Southeast Asia, *see* CEYLON. Pakistan's programme included improvements to the ports of Karachi and Chittagong and the completion of the Lower Sind barrage. (H. G. RN.)

Education. *Baluchistan:* Schools (Oct. 1949): primary 186, secondary 23, private 4, European 2, institutions of higher education 1; total pupils 18,500. *North-West Frontier Province:* Recognized educational institutions (1947-48): for males 1,059, students 101,377; for females 156, pupils 11,035. *Sind:* Schools (March 1946): primary, for boys 2,327, pupils 165,653; for girls 398, pupils 40,257; secondary, for boys 206, pupils 34,810; for girls 37, pupils 9,262. Colleges 9, students 3,700.

Agriculture. Main crops ('000 metric tons, 1948; 1949 in brackets): rice 12,846 (12,403); wheat (1949; 1950 in brackets) 4,169 (4,080); barley 136 (182); maize 419 (430); sugar, raw value 1,035 (1,035); jute 994 (820); cotton, ginned 195 (208); linseed 13 (12); sesame seed 34·5 (29·5); rapeseed (1947; 1948 in brackets) 249 (251); chick-peas 602 (798); tea 21 (20); tobacco 79 (79). Livestock ('000 head); cattle (1947-48) 24,296; buffaloes (1947-48) 5,600; goats (1939) 7,982; sheep (1947-48) 6,145; camels (1947-48) 454; horses (1947-48) 470; mules (1947-48) 41; chickens (1947-48) 22,248; ducks (1948-49) 5,063. Wool production, greasy basis ('000 metric tons, 1948; 1949 in brackets) 10 (12). Milk production ('000 metric tons, 1948): cow 2,477; goat and buffalo 3,340. Fisheries (annual est.): total catch 183,475 metric tons; value Rs. 151·7 million.

Industry. Employment (1949): all industries 662,000; manufacturing 200,000. Fuel and power: coal and lignite ('000 metric tons, 1949; 1950, six months, in brackets) 336 (250); electricity (million kwh., 1949) 169; crude oil (metric tons, 1949; 1950, six months, in brackets) 118 (83). Raw materials ('000 metric tons, 1948): rock salt 140; chromite 16. Manufactured goods ('000 metric tons, 1949): cotton cloth and yarn 13·6; glassware 7·3; vegetable oils 90·4; cement 325.

Foreign Trade. (Seaborne, million rupees, 1949) import 1,273; export 898. Main sources of imports: U.K. 31·2%; India 15·3%; U.S. 10·7%. Main destinations of exports: U.K. 22·2%; India 10·0%; France 8·7%; U.S. 7·9%. Main imports: cotton piece-goods 22·6%; cotton twist and yarn 14·7%; machinery and millwork 7·4%; vehicles (excluding locomotives, etc.) 5·6%. Main exports: raw cotton 46·0%; raw jute 32·5%; black tea 6·4%; raw wool 4·1%.

Transport and Communications. Roads (1949): 55,913 mi. Licensed motor vehicles (Dec. 1949): cars 17,000; commercial 12,000. Railways (1949): 6,682 mi.; freight ton-mi. (1947-48) 1,979 million; passenger-mi. (1947-48) 4,334 million. Shipping (1949): merchant fleet 120,000 gross tons. Air transport (1949, six months): 1,175,250 mi. flown. Telephones (Jan. 1949): 16,454. Radio receiving sets (1949): 75,000.

Finance and Banking. (Million rupees) budget (1949-50): revenue 754·6, expenditure 1,293·8; (1950-51 est.) revenue 772·8, expenditure 1,157 including defence 500. Internal debt (1948-49): 894. Currency circulation (Sept. 1949; Sept. 1950, in brackets): 1,750 (1,686). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 550 (449). Bank deposits (Sept. 1949; Sept. 1950 in brackets): 972 (1,065). Monetary unit: Pakistan *rupee* with an exchange rate of Rs. 9·27 to the pound and Rs. 3·31 to the U.S. dollar.

PALAEONTOLOGY. The advancement of palaeontology rests upon two foundations of equal importance: the collection of material which sheds light upon the life of the past; and the adequate investigation and description of this material so that the details of the picture may be filled in. The wider the geographical range over which these joint processes can be spread, the better the total picture must be. In all these respects the year 1950 proved satisfactory.

In Nov. 1949 and in the spring of 1950 geological history was made by the discovery of triconodont jaws in the Trinity (Cretaceous) sands of Texas. The finds, which were the first of this nature in America, were made by Bryan Patterson and Rainer Zangerl of the Chicago Natural History museum. Triconodonts are primitive Mammalia, so far known only by pieces of jaws; the only previous discovery, from Dorset in England, formed a study by Richard Owen in the *Encyclopædia Britannica* (8th ed., vol. xvii, p. 161, 1853-60).

In the realm of purely descriptive work a steady collation of knowledge was achieved, and it was especially satisfactory that records were made from many different areas. As usual, much work was done upon the zoologically simple but economically important Foraminifera, which are used in dating deposits in oil surveys. F. R. S. Henson described the development and outlined the classification of the Peneroplidae, a family of calcareous-porcellanous forms, from a wide range of Tertiary localities in different countries in the middle east.

Higher in the zoological scale are the *Zoantheria rugosa*, a group of fossil corals, whose evolution from mid-Ordovician to mid-Permian rocks was studied by H. C. Wang. The classification outlined was based upon the minute details of the skeletal structure and promised much to further the knowledge and stratigraphical use of these fossils. L. F. Spath continued his distinguished work upon ammonites, describing a new fauna of Tithonoid age (Jurassic) from Kurdistan.

Vertebrate palaeontology usually attracts more attention than invertebrate; but in 1950 several fundamentally important papers were issued. Amongst these was Eric Jarvik's investigation of the Devonian fishes of Greenland: these are remains of the fringe-finned fishes or Crossopterygia, from which the ancestors of the Amphibia were undoubtedly derived; and this study, though devoted to the structure and development of the scales and teeth, was a contribution to a significant chapter of evolutionary history. In a similar field, E. I. White described the ostracoderms from the Lower Old Red Sandstone beds of the Welsh borders.

The description of a fine series of theriodont reptiles from the Permo-Trias of the Ruhuhu district of Tanganyika, in the collections of Tübingen university, was given by the eminent German palaeontologist, Friedrich von Huene: as the mammals are descendants of theriodonts, this also throws an important sidelight on evolutionary history; and von Huene provided some new reconstructions of the skeletons of these animals.

In North America Hildegarde Howard described fossil birds from the Pliocene of California; and R. W. Wilson published a comprehensive series of papers on fossil rodents (of Tertiary age) from the same state. These results were published by the Carnegie Institute of Washington. Meanwhile Claude Hibbard continued his researches upon a wide range of mammals of the Rexroad (Pliocene) formation of Fox canyon, Kansas; and Willis Stovall and William McNulty dealt, further south, with an interesting assemblage of mammals from the Pleistocene of Henderson county, Texas.

In Europe the collection of mastodon remains in the Bavarian state collection in Munich was fully described and figured by Ulrich Lehmann, a valuable piece of work for all subsequent investigators.

Palaeobotany. A diverse series of small but important papers marked studies in fossil botany in 1950. Rhodes Fairbridge identified certain rock structures in the

pre-Cambrian of Western Australia as the remains of algal limestones. In Italy, Ardito Desio and Alberto Chiarugi described Lepidodendron specimens from Fezzan in north Africa. The Portuguese geologist Carlos Teixeira published an account of the Permo-Carboniferous plants of his country and also dealt with the fossil flora, of Pliocene age, of Alfeite. W. J. Jongmans' survey of the plant background of life through the ages, " Het wisselend Aspect van het Bos in de oudere geologische Formaties," from *Hout in alle Tijden* (Deventer, 1949; received in libraries 1950), gave valuable reconstructions of many forms and a fine series of photographs of dioramas of palaeobotanical interest in museums of Europe and the United States.

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PALAU (PELEW) ISLAND: *see* PACIFIC ISLANDS, U.S.; TRUST TERRITORIES.

PALESTINE: *see* ARAB LEAGUE; ISRAEL.

PANAMA. Republic of Central America adjoining South America and bisected by the canal zone (leased to the U.S.). Area: 28,575 sq.mi. Pop.: (1940 census) 622,576; (mid-1949 est.) 763,800. Both area and population are exclusive of the canal zone. The racial composition includes Europeans (11%), native Indians (9%), Negroes (14%), *mestizos* or mixed (65%), the rest being Asiatics. Language: Spanish. Religion: Roman Catholic 93%, Protestant 6%. Chief towns (1949 est.): Panamá City, on the Pacific coast (cap., 146,117); Colón, on the Atlantic coast (54,334). President of the republic, Arnulfo Arias Madrid.

History. Repressive measures against both Liberals and Communists highlighted Panama's political history during 1950. In January José Daniel Crespo, former minister of the interior, and three other Liberals were placed under house arrest reportedly for harbouring clandestine wireless equipment. In July Crespo and another Liberal were imprisoned for 20 days for publishing charges of President Arias' complicity in the secret drug trade. Meanwhile the authorities had closed down the local headquarters of the People's (Communist) party and on Nov. 2 the National Assembly approved a supplementary appropriation of $13,000 to help stamp out Communism.

In a convention signed on Jan. 26, Panama agreed to honour $350,000 worth of U.S. claims filed as far back as 1915. On Aug. 2, the president and his cabinet agreed to offer the United Nations use of the nation's military bases, roads, merchant marine and volunteer troops for Korea.

The year was marked by drastic reduction of government expenditure in an attempt to balance the budget, new price controls to check inflation and a new loan to consolidate the foreign debt. The new $10,556,875 obligation, at 3% interest, cancelled five separate loans at varying rates for an annual saving of $240,000.

A world-wide boycott of Panama-registered shipping was voted into effect April 18 by the International Transport Workers federation in an effort to force better wages and working conditions in the Panama merchant marine. In July the government pledged to improve its shipping conditions.

Education. Schools (1948-49): primary 922, teachers 3,175, pupils 101,249; secondary 15, teachers 316, pupils 7,155; professional 52, teachers 497, pupils 9,149. The National University enrolled 1,100.

Trade and Resources. Exports during 1949 amounted to $11,050,305 ($10,477,272 in 1948); imports $62,148,370 ($63,775,726 in 1948). About 90% of the trade was with the U.S. The chief exports in 1949 were: bananas, abacá fibre and cocoa. Imports were mainly manufactured and semi-finished goods.

Communications. At the end of 1949 there were 223·4 mi. of railway and 1,479 mi. of highways. At the end of 1948, 14,932 cars and 6,417 lorries and buses were registered. There were 8,400 telephones and about 50,000 wireless sets. The merchant marine on Dec. 31, 1949, registered 725 ships totalling 3,587,049 tons.

Finance. The monetary unit is the *balboa*, maintained at par with the U.S. dollar. The national budget for 1950 called for expenditures of $32·2 million ($33·2 million in 1949). At the end of 1949 the deficit was approximately $2·5 million, the foreign debt $15·3 million, and the domestic debt $12·1 million. Currency circulation (July 1950): $25·4 million. (M. L. M.)

PANAMA CANAL ZONE. A United States military reservation embracing a ten-mile strip across the Isthmus of Panama, leased for the protection and administration of the Panama canal. Area: 553 sq.mi., including 190·9 sq.mi. of fresh water. Population, exclusive of uniformed military personnel (1949 est.): 46,461, including 22,830 U.S. citizens. Administrative centre, Balboa Heights (pop., 1946, 12,623). Governor, Brigadier General Francis K. Newcomer.

History. In Sept. 1950 the U.S. government enacted a measure reorganizing the administration and accounting system of the Canal Zone with a view toward greater efficiency The new act established two distinct agencies: (1) the Panama Canal company, to be solely in charge of canal operations; (2) the government of the Canal Zone, to be responsible for civil functions. The costs of the latter agency were to be calculated separately from those of the former and not computed into the base on which canal toll rates are set.

Education. Schools (1949): 14 schools with 4,509 pupils and a junior college for whites; 14 schools with 3,277 pupils and a normal school for non-whites.

Finance. Total canal revenues (1948-49): $20,744,911; net expenses $21,217,495; net capital investment $721,907,811. During the fiscal year 4,793 ships passing through the canal carried cargoes totalling 25,305,158 tons and paid tolls amounting to $20,541,230. (M. L. M.)

PAN AMERICAN UNION: *see* ORGANIZATION OF AMERICAN STATES.

PAPER AND PULP INDUSTRY. World demand for pulp and paper during 1950 reached dimensions never previously experienced. By the end of the year British manufacturers were quoting 1952 delivery for some grades, pressure from all countries on paper exporters was extremely heavy, current demand had far outstripped immediate production and pulp supplies were reported to be in a difficult position.

Contributory causes were heavy purchases by the U.S., gradual freedom from government restrictions, the postwar revival of industry, the spread of literacy, an ever-increasing world population and a continued lack of exports of pulp and paper from countries controlled by the U.S.S.R. Concurrently, production of paper and paper board increased all over the world but it was insufficient to offset the demand.

World wood pulp production was estimated to be more than 30·5 million short tons; it was hardly more than 16·75 million tons 20 years ago. In 1948 Canada and the U.S. produced 25% more pulp than was produced throughout the whole world in 1928.

World usage of paper in 1950 was completely one-sided: while per capita consumption in the U.S. was 360 lb., the Economic Co-operation administration disclosed that consumption in countries receiving Marshall aid ranged from 5 lb. only in Greece to 155 lb. in Sweden. The average for the European continent was 56 lb., and in many other parts of the world the consumption was much lower. European consumption in 1950 was less than before World War II but it was intended to raise this by 10 lb. per capita by 1952 (this would entail production of a further 1,350,000 tons).

Production in Great Britain was nearly back at the prewar standard (2,600,000 tons), with paper reaching 96% and paper board 139%. This was accomplished with imported materials reduced by 11% of the prewar quality, greater use being made of home materials and other means. Exports rose to over 150% of 1938's total, but imports were still low at only 65%, the greater part of which was paper board. In Sweden, where a shortage of paper for home consumption was reported, annual production passed 1,100,000 tons (with 1,250,000 tons expected for 1952) and wallboard production was upgrading rapidly. Norway produced 465,000 tons of paper and paper board in 1949, slightly less than in 1948 but chemical pulp production reached 432,000 tons and mechanical pulp 900,000 tons. Western Germany, where prewar pulp production was 2,544,000 tons for the whole of Germany, could offer 676,000 tons in 1950 and although returns for paper and paper board disclosed an increase of 64% over the figure for 1948, production here was still 20% below the prewar level (included in this total was 127,000 tons of newsprint). The Netherlands had a capacity-production for strawboard of 375,000 tons in 1950 (*cf.* the prewar 285,000 tons and the 188,000 tons of 1949). Italy had reached an annual production of 472,000 tons by the end of 1949 but had a home consumption of only a little more than 20 lb. a head, one of the lowest in Europe.

Generally increased production was indicated by exports from Sweden, Norway and Finland during the first half of 1950: newsprint moved up 5%, kraft 45%, cardboard and carton 65%, greaseproof 40%, M.G. sulphite 25% and printings and writings 35%.

In the U.S. production ran at 103·1% of capacity during 1950 and consumption had advanced by 94% since 1940. Canadian newsprint production had advanced by 44% since 1945 to a total of more than 5 million tons.

Australia had doubled its prewar figures for production and reached 207,000 tons moving to 218,000. Many grades were however not sufficiently supplied by home production, *e.g.* particularly boards but plans, including a new mill, were made to cover this. New Zealand announced a new pulp mill at Kinleith aiming at 25,000 tons a year. India raised production to 105,400 tons, with a target of 110,000 tons; expansion included one new machine. In South Africa a new board mill near Johannesburg was expected to have an initial output of 100 tons a month. Cuba had a capacity-production of 30,000 tons of paper and 7,500 tons of paper board. (V. S. S.)

PAPUA-NEW GUINEA. Under the Papua-New Guinea Provisional act, 1949, the territory of Papua and the trust territory of (former German) New Guinea are united into a single area administered by the Commonwealth of Australia. Areas: Papua, 90,540 sq.mi.; New Guinea proper, 69,700 sq.mi.; New Britain, New Ireland, Admiralty islands and certain of the Solomon islands (included in the trust territory), 23,300 sq.mi. Pop. (1941 est.): Papua, native about 300,000, white 3,070; New Guinea (including the islands), native 684,300, white 4,100. Capital of joint administration: Port Moresby (pop., 1937 est., 3,000). Administrator, Colonel J. K. Murray.

History. The year 1950 was notable for a new breath of air introduced into Papua and New Guinea affairs by the new Australian government. The minister for external affairs, Percy Spender, paid a visit to the territories at the end of March. He discussed many problems with local residents and also visited tribal chiefs. Later in the year a delegation from the federal parliament spent three weeks in the territories; the leader of the delegation, John Howse, parliamentary under secretary to the Department for External Affairs, also visited Bougainville and Manus.

In the House of Representatives in Canberra on June 1, Spender spoke at length on Papua-New Guinea. He declared his prime objectives as:

(1) The welfare and advancement of the native peoples and their increasing participation in the natural wealth of the territories.

(2) The development of the resources of the territories to the point ultimately where the area will be economically self supporting and thus advance the territories and its inhabitants and supply the needs of Australia and the world generally with the valuable commodities that the territories are capable of producing.

He announced that an ordinance would be enacted to provide for a Native employment agreement to replace the indenture system, and that the customs tariffs of Papua and New Guinea would be revised and replaced by a uniform tariff. (This was done on July 1). He also announced that it had finally been decided to abandon Rabaul as the capital of the territory of New Guinea in favour of the Kokopo area, 20 mi. away.

The U.N. Trusteeship council at its seventh session, June-July, considered the Australian report on New Guinea. The council expressed the opinion that much remained to be accomplished in the general development of the territory and recommended that the administering authority should endeavour to quicken the pace of political, economic and educational advancement. A U.N. mission, under Sir Alan Burns (Great Britain) as chairman, and consisting of representatives of China, France and the Philippines was in New Guinea from May 11 to June 14. Their report to the Trusteeship council was published in September.

Australia was deeply concerned at the possible transfer of Dutch New Guinea from the Netherlands to the Indonesian government. Spender, in many statements during the year expressed the government's view that Indonesia had no valid claim to the western half of New Guinea. In June Spender told the House of Representatives in Canberra that Australia thought it unreal and unreasonable that any change in the status of western New Guinea should occur which disregarded the interests of the natives and of Australia. (*See* also NETHERLANDS OVERSEAS TERRITORIES: NEW GUINEA.)

See G. H. Cranswick and I. W. A. Shevill, *A New Deal for Papua* (Melbourne, 1949), L. Lett, *Sir Herbert Murray of Papua* (Sydney, 1949).

PARAGUAY. Land-locked republic in south-central South America, bounded N. and E. by Brazil, S. by Argentina and W. by Bolivia Area: 157,047 sq.mi. Pop.: (1936 census) 931,799; (mid-1949 est.) 1,304,000. The people are a homogeneous mixture of Guarani Indian and Spanish, with a small proportion of Portuguese and Italian stocks Spanish is the official language but Guarani dialects are used by the majority of the population. The official religion is Roman Catholic, and the archbishop is president of the Council of State. Chief towns (pop., 1948 est.): Asunción (cap., 130,067); Villarica (31,081); Concepción (16,487). President of the republic, Federico Chaves (*q.v.*).

History. The Colorado party took over the country in June 1948 from the military government of General Higinio Morínigo which had been in power since early 1941. Early in 1949 a military *coup* sought to bring back to Paraguay the exiled Liberal and Franquista leaders for a general election, but the two factions of the Colorado party united to induce other military officers to restore the party to authority. In Sept. 1949, the president, Felipe Molas López, who belonged to the Guión (Standard) Colorado faction, was ousted by the Democratico Colorado faction in favour of Federico Chaves, who had been the head of the entire party for many years. This brought about the exile of the Guión Colorado leaders. In April 1950 a party convention which included only the Democratico Colorados was held to nominate candidates for the presidency and for the congress.

Federico Chaves was nominated for the presidency without opposition; he was elected on July 16 and inaugurated on Aug. 15. The country remained peaceful during the rest of the year, though the government stated that it forestalled a number of conspiracies. (W. Ft.)

Education. Schools (1947): elementary, state 1,293, pupils 176,465, teachers 4,157; elementary, private 19, pupils 8,148, teachers 202; secondary 14, pupils 2,054; vocational 129. National university (1950), students about 1,800, professors and lecturers, about 100.

Agriculture. Main crops (1950 est., metric tons): maize 127,000; rice 20,000; cotton 45,000; cotton seed 26,300; tobacco 10,000. Citrus fruit (1950, boxes): grapefruit 220,000; lemons 168,750; limes 149,100; the orange and tangerine yields were lower than in 1949. Cattle was estimated in 1950 at 3,369,000 head.

Foreign Trade. (1949 million guaranis) import 88·1; export 101·9. Principal exports: quebracho extract, timber, cotton, hides, canned beef, tobacco, yerba maté and petitgrain oil.

Transport and Communications. Water transport on the Paraná and Paraguay rivers handled 440,000 metric tons in 1948; rail transport handled 240,000 tons. Railways (1949): 278 mi. Roads (1950): paved about 500 mi., earth about 4,000 mi. Motor vehicles (Jan. 1950): 3,100 including 1,800 cars. Telephones (1949): subscribers 5,000. Wireless receiving sets (1948): 25,000.

Finance. (Million guaranis) budget (1949 est.): revenue 54·8; expenditure 70·8. Currency circulation (March 1950): 86·6. Monetary unit: *guarani* with an official exchange rate of 8·65 guaranis to the £ and 3·09 guaranis to the U.S. $.

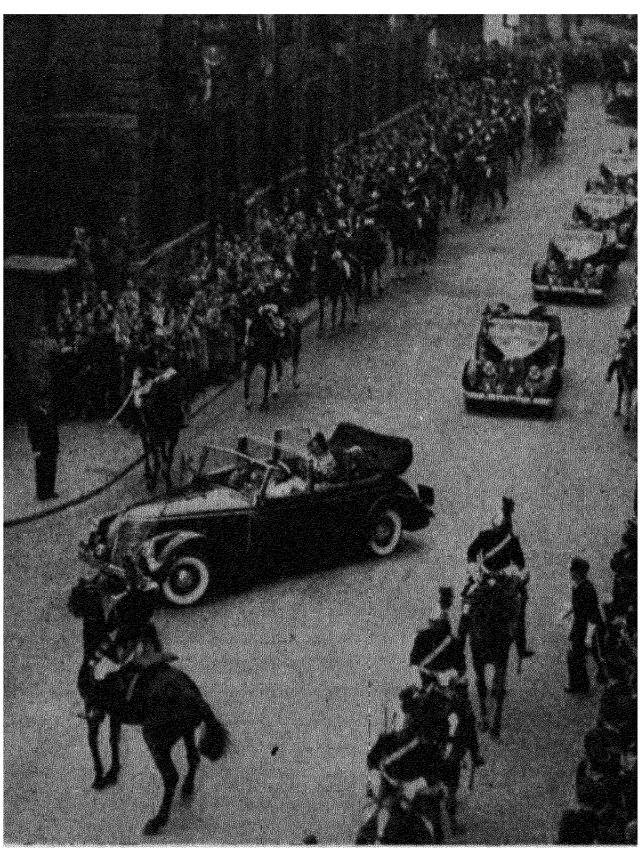
PARIS. Capital and largest city of France. Pop. (1946 census): 2,725,374. President of the municipal council, Pierre de Gaulle (elected for the fourth time, for a year, on Nov. 20, 1950).

To the 1,400,000 tourists who visited the French capital during 1950, and who spent there the equivalent of nearly $100 million, Paris presented an aspect not only of completely unrestricted well-being, but of luxury and abundance as well. Hotels and restaurants, cafés, bars and night clubs of every category were more numerous than at any time since before 1940; transport facilities were greater and, in general, there was a marked increase of all commodities and services that, in any way, touched upon the tourist and related luxury trades. With its 48 legitimate theatres (including 5 state theatres), 15 operetta theatres and music-halls, 2 circuses and over 300 cinemas there was no lack of formal entertainment, and the sportsman had the additional choice of 8 race courses and 12 stadiums and velodromes. Mass communication media in the city included 16 daily and 12 weekly newspapers and magazines, having a combined circulation of 4 million. To these should be added the activities of three state radio stations and over 170 publishers.

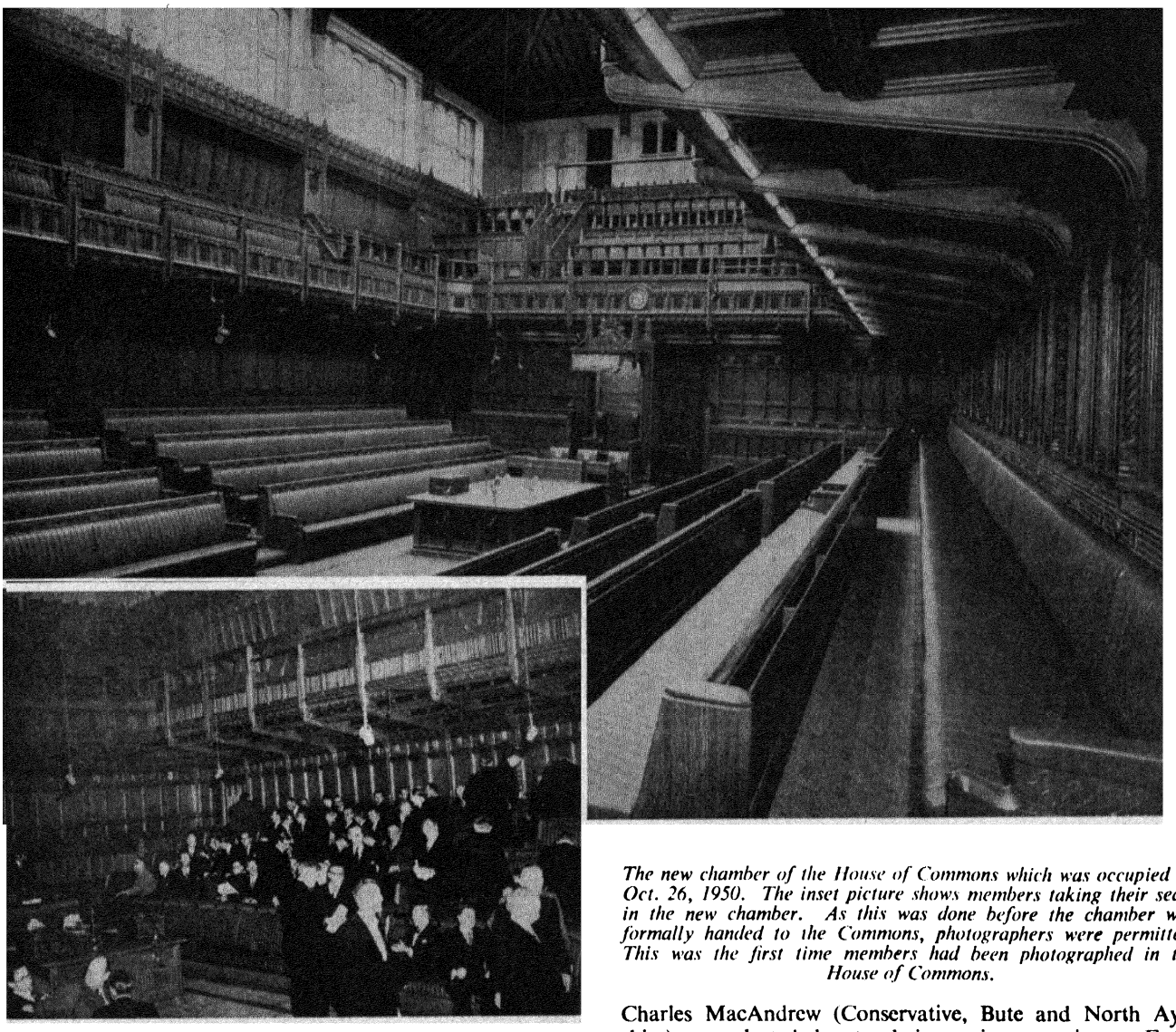
As usual in the Seine city, there was a continuous programme of artistic events that included opera, ballet, art shows, symphony concerts and special exhibits in the numerous state museums. An innovation was the summer season of music festivals in the Paris suburbs of Clamart, Sceaux and Versailles. The essentially Parisian museum, the Musée Carnavalet, presented an exhibition of masterpieces loaned from private Paris collections (first public showing); an important Balzac exhibit was arranged at the Bibliothèque Nationale: and the Ministry of Fine Arts opened a new museum in the Château de Sceaux, to be known as the Musée de l'Ile de France, for the purpose of housing collections from neighbouring châteaux. Paris was chosen, too, as meeting-place by some 25 international scientific and cultural organizations. Pageantry was supplied by the presence of several royal visitors (the queen and prince consort of the Netherlands, the king and queen of Denmark and the sultan of Morocco were guests of the president of the republic); by the state funeral of the Socialist leader and former premier, Léon Blum (*see* OBITUARIES); by the ceremony during which the ashes of the distinguished physicists Jean Perrin and Paul Langevin were transferred to the Panthéon.

But the living conditions of an increasingly large portion of the population left much to be desired. The housing situation was critical, and more than 50,000 priority requests for official help in obtaining suitable living quarters remained unsatisfied. It was estimated that these requests were increasing at the rate of 1,200 a month, with no hope of relief in sight, since funds available for municipal housing schemes were less than half of what was needed and rent legislation had put an end to normal renting conditions. Salaries remained low by comparison with the cost of consumer goods and services, and although there was a rise in the price of many commodities by the end of the year (bread was at Fr. 36 per kg., coal at Fr. 12,000 per ton. butter at Fr. 762 per kg., gas at Fr. 25 per cu. metre, etc.) efforts begun in the spring by the trade unions to have the basic salary pegged at Fr. 17,500 a month instead of Fr. 11,480 (by December that demand was increased to Fr. 18,225) obtained only partial satisfaction among a limited category of workers. In consequence, the majority of the Parisian population was unable to share in the abundance and luxury evident in the shops, and certain smaller shopkeepers were themselves haunted by the spectre of *la crise*. To aggravate this situation, social insurance levies proved to be insufficient, and a revision with possible reduction of these services was under consideration. In this connection, the introduction into the 1950 social insurance programme of surgical facilities, and the designation of the Hôpital Foch, in the Paris suburb of Suresnes, for this purpose, was a gain that it was earnestly hoped would not have to be abandoned for lack of funds.

The Ministry of Education reported that 181,000 children of all ages were enrolled in the 579 state schools located in Greater Paris (Seine *département*). Educators felt, however, that the lower age groups, grown suddenly larger as a result of a sharp rise in the postwar birth-rate, were not adequately provided for. The city's budget for 1951 was tentatively balanced at Fr. 47,050 million as compared with Fr. 44,000 million in 1950. (M. Jol.)



Queen Juliana of the Netherlands and President Vincent Auriol arriving at the Elysée during the queen's state visit to Paris, May 1950.



The new chamber of the House of Commons which was occupied on Oct. 26, 1950. The inset picture shows members taking their seats in the new chamber. As this was done before the chamber was formally handed to the Commons, photographers were permitted. This was the first time members had been photographed in the House of Commons.

PARLIAMENT, HOUSES OF. The parliament elected in July 1945 was in recess at the beginning of 1950 and before it was due to re-assemble a general election was announced to be held on Feb. 23. Parliament was dissolved on Feb. 3, nominations closed on Feb. 13 and, with the exception of the Moss Side division of Manchester, polling took place throughout the country ten days later. The Liberal party put up 475 candidates, the largest number for over 30 years. There were 617 Labour candidates, 568 Conservatives and Ulster Unionists, 100 Communists and 108 others. In all there were 1,868 candidates for 625 seats. The Representation of the People act, 1948, had removed the university seats and reduced the total number of constituencies from 640 to 625.

Of the electorate of 34,269,764 percentage voting was 84, the highest vote and the largest electorate in history, against 76% and 32,836,419 in July 1945. The final state of the parties was: Labour 315; Conservative (and supporters) 298, Liberal 9, Irish Nationalists 2, the speaker. (*See* also ELECTIONS and GREAT BRITAIN, UNITED KINGDOM OF).

The 39th parliament of the United Kingdom of Great Britain and Northern Ireland, with the most evenly divided House of Commons for 100 years, met on March 1 and its first session was opened by the King on March 6. Colonel Douglas Clifton-Brown (Conservative, Hexham) was re-elected speaker, Major James Milner (Labour, South-East Leeds) was re-elected chairman of ways and means and Sir Charles MacAndrew (Conservative, Bute and North Ayrshire), was elected deputy chairman in succession to F. G. Bowles (Labour, Nuneaton) in order to provide one Labour and one Conservative.

The small government majority was soon tested in a division; the first two divisions on the King's speech gave majorities of 14 and 25. The first government defeat occurred on March 29 on an opposition motion after a debate on the quality of coal. On May 2 a tie took place at the end of a supply day on transport. It was the first tie since 1939 and Major Milner, who was in the chair, cast his vote in accordance with precedent and declared the supply vote carried.

On Oct. 23 the members of the Commons met for the first time in the new chamber, architecturally designed by Sir Giles Gilbert Scott (*q.v.*) and with engineering and structure by Oscar Faber, to replace the chamber destroyed in an air raid in May 1940. On Oct. 26, in the presence of 28 speakers from the Commonwealth parliaments, the King received addresses in Westminster Hall from both houses of parliament. The Commons formally recorded their thanks for the loan of the Lords' chamber for more than 10 years and the Lords returned to their own chamber.

The Commons chamber was designed on very similar lines to that which it replaced, the accommodation for members being the same—346 seats on the floor of the house and 91 in the side galleries reserved for members not taking part in the business of the house; but additions to the public galleries increased the total seating from 802 to 939. The parliaments and assemblies of the Commonwealth made gifts to the new

house. The speaker's chair in black bean was from Australia, the table of the house in oak from Canada, the two despatch boxes in purrini from New Zealand. The two entrance doors were from India and Pakistan, while Ceylon gave the chair of the sergeant-of-arms, and South Africa the chairs in stinkwood for the clerks. The table in the prime minister's room was inlaid with wood from each Commonwealth country.

Ten by-elections were held during the year, all of which were contested. Labour retained six, the Conservatives retained three and the Ulster Unionists retained one. An interesting feature of three by-elections, Handsworth, South-East Bristol and West Belfast, was that the successful candidates were aged 27, 25 and 23 respectively—each successively becoming the youngest member of the House. Of the ten vacancies five were caused by death.

The only change in the composition of the House of Commons after the election was the resignation from the Labour party on Aug. 4 of Raymond Blackburn (Northfield, Birmingham). In April the Marquess of Reading and Lord Rennell, who had been members of the Liberal party for many years, joined the Conservative party. Shortly afterwards the Marquess of Willingdon resigned from the office of Liberal chief whip in the House of Lords and Lord Cowdray left the Liberal party and became an independent.

The member elected to the House of Commons for Belfast West, the Rev. J. G. MacManaway, was a clergyman of the Church of Ireland and immediately after the election doubts were expressed in the House of Commons as to his eligibility to sit. His case was examined by a committee of the House and the judicial committee of the Privy council was asked for its opinion. Its view, that he was not entitled to be a member, was accepted by the House on Oct. 19 and his seat was declared vacant. A member also of the Northern Ireland House of Commons, he continued to sit there throughout 1950.

In the second session of the parliament, opened by the King on Oct. 31, provision was again made for the introduction of bills by private members. In addition, members were again permitted to introduce bills under the "ten-minute rule." The first bill under this rule, the Hackney Carriages (London) bill, was brought in by H. W. Butcher on Nov. 21, and was given a first reading by a majority of four. During the committee stage of the Festival of Britain (Sunday Opening) bill, an amendment to prohibit the Sunday opening of the fun-fair in Battersea park was carried against the government on a free vote by 389 votes to 134.

Eight members and former members of the House of Commons—all Labour—were raised to the peerage during the year. They were Viscount Alexander of Hillsborough (formerly A. V. Alexander), Lord Burden (T. W. Burden), Lord Douglas of Barloch (Sir Francis C. R. Douglas), Lord Haden-Guest (L. Haden Guest), Joseph Henderson (who took the title of Lord Henderson of Ardwick but died before he could take his seat), Lord Lawson (J. J. Lawson), Lord Ogmore (D. Rees Williams), Lord Silkin (Lewis Silkin) and Lord Wilmot of Selmeston (John Wilmot). The former clerk of the House of Commons, Sir Gilbert Campion, was made Lord Campion. Others made peers in 1950 were: Lord Bilsland (Sir Alexander Steven Bilsland), Lord Greenhill (E. Greenhill), Lord Hives (E. W. Hives) (*q.v.*), Lord Hurcomb (Sir Cyril Hurcomb) and Lord Morris of Kenwood (H. Morris).

Winston Churchill (*q.v.*) celebrated during the year the 50th anniversary of his entry to the House of Commons for Oldham on Oct. 1, 1900. In his parliamentary career he had fought 18 elections—in five of which he was beaten—sitting in turn for Oldham, North-West Manchester, Dundee, Epping and Woodford. Lady Megan Lloyd-George completed 21 years' continuous membership of the House of Commons. She had represented Anglesey from 1929

Commonwealth. In New Zealand the Legislative Council was abolished. The prime minister, S. G. Holland (*q.v.*), stated that he did not consider the council a satisfactory second chamber, but said that the government would consider all possible alternative forms of second chamber.

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PATENTS. The year 1950 was relatively uneventful in the domain of patents. It saw however the coming into force in the United Kingdom of the new and comprehensive Patents act, 1949, which consolidated the law of patents as revised during the preceding year; and also the working out of new procedures under the act in connection with the grant of patents. Revised rules were brought into force covering not only the grant of patents but also patent actions in the high court and the registration of patent agents. Heavy arrears continued in the applications for patents awaiting examination in the United Kingdom Patent office; but some progress was made towards more normal conditions.

In India the Indian Patents and Designs act, 1911, was amended to provide for the grant by the controller of patents of compulsory licences to ensure that patented inventions in India would be worked to the fullest extent that was reasonably practicable and that the establishment or development of industrial activities in India would not be prejudiced unfairly.

In consequence of the ratification of the agreement between Belgium, France, Luxembourg and the Netherlands for the establishment of an international office to investigate the novelty of inventions about which applications for patents were made in those countries, the International Institute of Patents was inaugurated at The Hague in June and began operations using the documentation of the Netherlands Patent office. The project before the Council of Europe for the establishment of a European Patent office was under consideration by individual governments.

In preparation for a further conference of the International Union for the Protection of Industrial Property, the date for which was not yet settled, for the purpose of reviewing the convention of the union signed in London in 1934, the International Association for the Protection of Industrial Property met in Paris at Whitsuntide to consider what amendments of the convention were possible and desirable. Israel adhered to the international convention early in the year and was declared to be a convention country, for the purposes of the United Kingdom Patents act, by order in council in March. It was announced in April that the German Federal republic, having adhered to the international convention, was to be treated as a convention country for the same purposes. The German Patent office, set up at Munich in Oct. 1949, with a branch in Berlin, made progress towards a fully functioning patent office; and regulations were made for the restoration of Allied patents and patent applications which had become void in Germany during World War II and for the extension of their term in Germany to compensate for the war period. (J. L. BE.)

PEASANT MOVEMENT. Within the range of this subject the main features of the year were a new drive in the Soviet Union towards bigger collective farms, the cautious progress of collectivization in eastern European people's democracies and the retarding of collectivization in Yugoslavia.

A New Agrarian Revolution. In Dec. 1949 the Politburo of the All-Union Communist party decided to merge existing collective farms into bigger ones. Andrey A. Andreyev, the

member responsible for agricultural questions, was criticized for deviating from the party line, and Nikita S. Khrushchev (*q.v.*), another member, until Dec. 18, 1949, secretary general of the Ukrainian Communist party, was recalled to Moscow, officially to take over the regional party organization, but actually to become the party's chief agricultural executive. In a speech on March 7, and in an article in *Pravda* on April 25, Khrushchev stated that there were too many small collective farms or *kolkhozy* (in the Moscow province, for instance, 26% of the *kolkhozy* had less than 250 ac. of arable land), that small *kolkhozy* were incapable of utilizing the advantages of mechanization to the full and could deliver little produce to the state; they must, therefore, amalgamate into bigger *kolkhozy* because these were cheaper to run, had higher yields per acre and used proportionately less manpower. Economically this was true, but the main reason for the Dec. 1949 decision was political. Despite all efforts of the party the *kolkhoz* system had failed to become deeply rooted and the peasants remained hostile to it.

When in 1929 Joseph Stalin began compulsory collectivization of agriculture he intended to eliminate the *kulak* or rich peasant because this class enemy knew that "grain was the currency of currencies." He wanted also to transform the Soviet countryside into a number of large grain factories, that is, state farms or *sovkhozy* and collective farms, manned by brigades of specialized workers. The idea of large brigades, however, was stubbornly resisted by the peasants—now described as *kolkhozniki*—who preferred to work in smaller units of *zvena*. During World War II, when their wishes had to some extent to be considered, the brigade system was temporarily abandoned. While a brigade consisted usually of from 30 to 50 people, the smaller unit had only from 3 to 5 persons, that is, a peasant family might itself constitute one. If land, implements and draft animals were permanently given to the care of a smaller unit the result was a privately operated farm within a *kolkhoz*. All this happened with the full knowledge of the Politburo. When the party felt strong enough to put an end to this deviation and to redress the erroneous agricultural policy, the castigation of Andreyev was a concession to the customary Soviet ritual of producing a culprit for every shortcoming. Andreyev made a public self-criticism and his standing in the Politburo appeared unshaken, but another official was put in charge of what amounted to a revolution in the lives of Soviet peasants.

At the beginning of 1950 there were in the U.S.S.R. 254,000 *kolkhozy;* by October this number was reduced to 215,000. The transformation was especially radical in the provinces of Moscow (1,700 new *kolkhozy* instead of 6,000 old), of Yaroslavl (964 instead of 3,890) and of Leningrad (600 instead of 2,000). In Byelorussia, within the pre-1939 frontiers, the number of *kolkhozy* was reduced from 9,770 to 3,226; in the Ukraine, also within pre-1939 frontiers, there were at the end of the year, 19,505 *kolkhozy* instead of 33,653. In order to disrupt the former village communities, regarded by the party as centres of passive resistance, every bigger *kolkhoz* was to have its own town or *agrogorod.* By the end of the year scores of *agrogorody* were in construction throughout the Soviet Union and often the enterprise consisted merely in moving the houses of a few distant villages and reassembling them in a central and properly replanned village. This tremendous operation was meant to be the final stage of collectivization with the aim of totally proletarianizing the peasantry.

Temporizing in Eastern Europe. As "Socialist construction" was more difficult in the field of agriculture than in industry or trade, Communist leaders in eastern Europe, making use of Soviet experience, were approaching this task with caution. Failures meant not only great material losses, but also increased opposition among hungry industrial workers. The passage from a system of small peasant holdings to a fully collectivized agriculture demanded time and means which were a combination of compulsion and persuasion, of training of *cadres* in sufficient numbers and of possessing at least a minimum of tractors. In the Soviet Union large-scale collectivization could begin only 12 years after the Communist revolution: there was, therefore, no ground for surprise that by 1950 greater part of the land was still privately owned.

TABLE I. COLLECTIVIZATION OF AGRICULTURE IN EASTERN EUROPE

Country	Number of Producers' Co-operatives (Dec. 1950)	Number of Peasant Holdings Socialized	Percentage of Peasant Holdings	Area of Socialized Land ('000 ac.)	Percentage of Total Arable Land
Bulgaria	2,608	537,552	46·3	5,200	42·2
Czechoslovakia	2,271	110,000	8·0	2,500	18·5
Hungary	2,000	66,500	3·7	1,054	6·2
Poland	2,200	58,980	2·0	1,038	2·5
Rumania	1,006	65,800	3·5	433	1·8

In Bulgaria energetic measures were necessary to squeeze out from the villages the manpower necessary for completion of the five-year plan and the country was accordingly the most advanced on the path of collectivization. Vlko Chervenkov, the premier, announced that during 1950 the number of agricultural producers' co-operatives increased from 1,608 to 2,608, the number of socialized peasant holdings from 161,000 to 537,552 and the area of socialized arable land from 1·4 million ac. to 5·2 million ac. In Czechoslovakia collectivization of agriculture made progress: according to Klement Gottwald, president of the republic, the number of producers' co-operatives (*družstva*) rose from 250 in the autumn of 1949 to 2,271. Zoltan Vás, chairman of the Hungarian State Planning commission, said that during 1950 the number of producers' co-operatives (*kollektiv gazdaság*) increased almost fourfold and that their total area rose from 410,800 ac. to 1,054,300 ac. In Poland a communiqué published in December proclaimed the number of producers's co-operatives (*spółdzielnie wytwórcze*) had risen during the year from 245 to 2,200, but the government could not conceal that 97·5% of the arable land was still privately owned. In Rumania the number of producers' co-operatives (*gospodăria colectivă*) increased during the year from 55 to 1,006 but 98·2% of land was still the private property of the peasants, a quarter of whom were *kulaki* (in Rumanian *chiaburi*).

The producers' co-operatives in eastern Europe were not yet identical with the Soviet *kolkhozy*. They were divided into four types: in the first, land equipment and livestock remained the property of the individual peasant but the ploughing, sowing and harvesting were done collectively and crops were divided in proportion to the area of land and amount of work performed. In the second type the land was collectively owned, but livestock and equipment remained the private property of the members and the crops were divided as in the first case. In the third type land equipment and livestock belonged to the co-operative and crops were divided in proportion to the work done, livestock supplied and initial acreage. In the fourth type, the nearest to the Soviet *kolkhoz*, land, equipment and livestock were collectively owned and crops were divided only according to the amount of work performed. In Poland out of 2,200 producers' co-operatives 1,275 belonged to the fourth type. In Czechoslovakia, according to Rudolf Salzmann-Slanský, secretary general of the Communist party, by March 1950 there existed only a few dozen of the fourth type.

In the Cominform journal of July 28, 1950, Hilary Minc, the Polish vice premier and one of the prominent planners of eastern Europe, stated that in the period of the six-year plan conditions would be created to enable a considerable section of poor (that is, possessing under 12 ac.) and middle peasants

(possessing from 12 ac. to 25 ac.) to be embraced in Socialist producers' co-operatives. An adequate supply of tractors was one of the most important conditions. By 1955 Poland was to produce 12,000 tractors annually and Rumania 5,000 tractors, but Czechoslovakia planned to produce 20,000 annually by 1953 and Hungary 9,250 per annum by 1954.

TABLE II. TRACTOR STOCK AND ACREAGE PER TRACTOR

	Number of Tractors		Acreage per Tractor	
	1948	1955	1948	1955
Bulgaria	3,600	10,000*	3,427	1,234*
Czechoslovakia	22,000	45,000*	616	301*
Hungary	13,300	22,800†	1,274	743†
Poland	14,400	60,000	2,860	687
Rumania	11,000	25,000	2,188	963

* 1953. † 1954.

During the year the Peasant parties were still considered useful by the Communist rulers in all people's democracies. Considerable purges, however, took place in the ranks of the Polish United Peasant party. In November Andrzej Witos, Stanisław Osiecki and five other deputies were said to have voluntarily resigned their seats: three of them, including Mme. Hanna Chorążyna, were arrested before the announcement of their resignation. On Oct. 14 the Politburo of the Polish United Workers' (Communist) party and the executive committee of the Peasant party published a joint statement to the effect that the latter understood the necessity for an uncompromising policy towards the *kulaki*.

Yugoslavia. For Yugoslavia 1950, the fourth year of its five-year plan, was difficult in more ways than one. The harvest, affected both by drought and peasant resistance to collectivization, was only three-fifths of the prewar average. Marshal Tito himself acknowledged (*Politika*, April 28, 1950) that cultivated land was about 3 million ac. less than before 1940. In the summer of 1950 the country had 6,798 producers' co-operatives (*zadruge*) of four different types in which were grouped 353,800 peasant holdings totalling 3,807,326 acres. Including the state farms, collectivized land covered 5,221,614 ac., or 25·9% of the total arable land. (Under its five-year plan the government intended to collectivize 50% by 1951). The distribution of *zadruge* throughout the federal republics was, however, unequal: in the backward Crnagora (Montenegro) and Macedonia 77% and 50% respectively of all arable land was collectivized; in Bosnia-Hercegovina 19%; in the main producing areas the proportion was only 18% in Serbia, 14% in Croatia and 11% in Slovenia. It seemed that the majority of the peasants were against the regime. Had Yugoslavia been still a Soviet satellite country Tito could have used all the power of his police state against the peasants, but he could not do so in 1950; and the peasants themselves were aware that the choice was Tito or Stalin. (K. SM.)

PEKING, capital of China. Area: 273 sq.mi. Pop.: (1943 est.) 1,561,027, (1948 est.) 1,721,546. Mayor, Nieh Jung-cheng.

For the sixth time since it was founded as the capital of China by Kublai Khan in 1267 Peking found itself under a new set of rulers. After the Mongol dynasty the Mings (1368-1644) changed the name Khanbalig ("City of the Great Khan," known to the west as Cambaluc) to Peking—northern capital, in distinction from Nanking—southern capital. Then came the Manchus (1644-1912), the Nationalists who in 1928 moved their capital to Nanking and renamed the old capital Peiping ("northern peace"), the Japanese (1937-45) and the Communists who formally proclaimed their government in Peking (reviving the former name) on Oct. 1, 1949, though they had actually held the city since Dec. 1948.

Magnificently laid out by Kublai Khan, with broad tree-lined avenues and stately palaces and temples, and surrounded by walls on top of which four carriages could drive abreast, Peking possesses a unique charm and an atmosphere of its own which seems to have remained unchanged through all its vicissitudes. The quick surrender of the Nationalist General Fu Tso-yi to the Communists in Dec. 1948 spared Peking the pains of war of which it knew nothing but two days' desultory fighting south of the city and a few days without electric light. Its fortunes since then reflected the changing trends of Communist policy. Peking had never been a centre of big business, and the Communists' order that shopkeepers must sell no "luxury goods" but useful articles only hit the shops hard.

The student community was the one most affected. Peking had always been supreme as a centre of learning and culture. Here in imperial days were held the highest examinations, for the Chin Shih and Harrlin degrees, and before the war Peking contained 55,000 students including 7,000 girls. There were still many thousands, numbers of whom flocked out enthusiastically to greet the Communists. In contrast with the Kuomintang which suppressed all political manifestations among the students, it was the policy of the Communists to use them for the re-education of the masses. Schooling, however, would not be neglected. The Communists were specially keen on scientific and technical higher education. This was concentrated in the four major universities—Peking National university, Tsinghua, Normal National university and Yenching, smaller centres being closed. Except for the insistence on daily classes in Marxism-Leninism, no interference was experienced in the missionary colleges (such as Yenching). In the main Peking appeared to live as tranquilly as it had ever done, although the fact that it was the capital of a new kind of state was brough home to its residents by the necessity of carrying identity cards and the frequent mass demonstrations organized to denounce fresh sins by the imperialists. (O. M. G.)

PEMBA: *see* ZANZIBAR.

PERFUMERY: *see* SOAP, PERFUMERY AND COSMETICS.

PERSIA. Independent kingdom of western Asia, bounded E. by Pakistan and Afghanistan, N. by the U.S.S.R., W. by Turkey and Iraq and S. by the Persian gulf and Arabian sea. Area: *c.* 634,413 sq.mi. Pop. (no census ever taken, 1948 est.): 17,000,000. Language: mainly Persian, but some Turki and Armenian in the N., Kurd in the W., Arabic in the S. and Pashtu in the E. Religion: Moslem, mainly Shia but the Kurds (750,000) are Sunni; Christian (there are *c.* 50,000 Gregorian Armenians, a few thousand Catholic Armenians and 40,000 Nestorians); Jewish 80,000; and *c.* 10,000 Zoroastrian Parsees. Chief towns (1948 est.): Tehran (cap., 850,000); Meshed (250,000); Tabriz (214,000); Isfahan (205,000); Abadan (150,000); Shiraz (129,000); Resht (122,000); Hamadan (104,000). Ruler, Shahanshah Mohammad Riza Shah Pahlavi; prime ministers in 1950, Mohammad Saed Maragheh, Ali Mansur (from March 23) and General Ali Razmara (from June 26).

History. On Jan. 11, 1950, the government of Mohammad Saed Maragheh resigned. The outgoing premier was asked to form a new government. Notable changes in the new cabinet were: Aliakbar Siassi, appointed foreign minister, Abbasgholi Golshayan, appointed finance minister, and Taghi Nasr, minister of national economy. On Feb. 9 the shah officially opened the 16th session of Majlis and the 1st session of the Senate. The Majlis lacked the deputies of Tehran. Elder statesmen and ex-generals formed the 30 nominees of the shah in the Senate; the other 30 were elected.

On Feb. 19, Persia and Pakistan signed a treaty of friendship providing for neighbourly relations and for most-favoured-nation treatment. Following up the policy of consolidating friendship with the neighbouring Moslem



General Ali Razmara (centre, smiling) entering the parliament building, Tehran, June 1950. On his right is Major General Abdollah Hedayat, minister of war.

countries, the shah arrived by air on March 1 at Karachi for a 16-day state visit. On March 16 Persia signed a treaty of friendship with India.

Results of the Tehran elections, on March 16, showed that Mohammad Mossadegh, leader of the National Front party and his followers had won 6 of the 12 seats. Directly after this, and as a result of persistent attacks in Majlis and Senate, Mohammad Saed Maragheh again resigned. Ali Mansur formed a new cabinet (March 23) in which Hussein Ala was foreign minister, Ebrahim Zand minister of the interior and General Morteza Yazdanpanah minister of war.

The remains of Reza Shah Pahlavi, who died in exile in Johannesburg in 1944, were entombed on May 7 in a great mausoleum in Tehran. Five days later the Persian government protested to the Soviet Union and other Soviet-dominated countries, whose representatives in Tehran had abstained from participating in the burial procession of the late shah.

Between May and July the Soviet government sent two notes of protest to the Persian government and received two replies. On May 14 the U.S.S.R. protested to Persia alleging unfriendly activities on the Soviet border. The note referred to the formation of an Iranian oil joint stock company for prospecting oil and complained of the presence of foreign and in particular U.S. experts for topographical and geological surveys and aerial photography. The Soviet note stated that these activities could create a danger to the frontiers of the U.S.S.R. and called this incompatible with the provisions of the Soviet-Iranian treaty of Feb. 26, 1921. Four days later the Persian government replied that no abnormal situation existed between the two countries and no action was taken contrary to good neighbourly relations. It added that survey planes would not be permitted to approach the Soviet border. On June 22 another Soviet note repeated former charges and called the aerial survey " a measure of military significance." On July 16, the Persian government rejected the Soviet complaints but said that in order to remove friction and misunderstanding air surveys would be stopped and only Persian surveyors employed in ground survey. It added that Persians were free to do what they liked in their own territory.

Two loans totalling £14 million, free of interest, were made by the Anglo-Iranian Oil company to the Persian government on account of current royalties (£6 million in June and £8 million in September).

On June 26 Ali Mansur's government resigned and General Ali Razmara, army chief of staff, was appointed prime minister. The new premier, 50-year-old, graduated from the Saint-Cyr military school in France and was considered to be a strong man bent on social and economic reforms. General Razmara presented his cabinet to Majlis and on July 4 got a vote of confidence by 94 votes to 7 with 3 abstentions. On the same day Persia approved the Security council's action in Korea.

The premier's firm handling of the complicated social and economic problems of the country and his decentralization plans met with severe criticism from the National Front party in Majlis who organized a vociferous opposition. But despite fierce denunciations and wild accusations of dictatorship General Razmara stood his ground and tried to balance the policy of close relations with the U.S. by lending a favourable ear to the Soviet suggestion of renewed trade relations. Thus the commerce and navigation agreement between Persia and the Soviet Union of March 25, 1940, which had lapsed, was on Nov. 4 renewed for another year. The Soviet Union and Persia agreed to exchange iron and steel parts, timber, cement, textiles and newsprint for rice, tobacco, skins, dried fruit and gum tragacanth. This barter arrangement was to be conducted through the government agencies. The Soviet Union agreed also to discuss the outstanding question of the return of 11 tons of gold owing to Persia since the end of World War II.

The U.S. Export-Import bank granted on Oct. 10 a loan of $25 million for the improvement of roads, other communications and agriculture in Persia. On Oct. 18 an agreement was signed in Tehran between the Persian prime minister and the U.S. ambassador, whereby the United States offered Persia technical co-operation in improving living conditions in rural areas. The U.S. government allocated $500,000 from Point Four programme appropriations for the current fiscal year. This was the first appropriation of this kind and emphasis was to be on health, agriculture and education for villages near main centres of population.

The special parliamentary commission set up to consider the supplementary oil agreement signed by the government of Saed Maragheh and the Anglo-Iranian Oil company but still subject to ratification by Majlis, rejected it on Nov. 26 Under this agreement the Persian government was to receive increased royalties of over £22 million for 1949. (X.)

Education. Schools (1942-43) elementary: 2,401, pupils 244,315, teachers 9,748. There were two universities (Tehran and Tabriz) and three university colleges (1949), students 5,919.

Agriculture and Fisheries. Main crops ('000 metric tons, 1948; 1949 in brackets): wheat 1,550 (1,630); barley 550 (650); cotton, ginned 20 (18); sesame seed 4; rice 424; sugar, raw value 46; total grapes 260; oranges and tangerines 60; tobacco 10·1 (11·3); tea 5·5 (4·5). Livestock ('000 head, 1948-49): cattle 2,100; sheep 11,000; horses 310; mules 42; buffaloes 10; camels 600. Wool production, greasy basis (1949), 13,000 metric tons. Fisheries (production of Société Mahie) approximate catch of sturgeon 5,000 tons from which 30 tons of caviar are extracted.

Industry. Persons engaged in industry (1948) 20,000. Fuel and power: coal (1948) 150,000 metric tons; crude oil ('000 metric tons, 1949; 1950, six months, in brackets) 27,240 (15,944). Raw materials (metric tons, estimated annual production): copper ore 1,000; sulphur 600; red oxide 10,000; arsenic ore 500. Cement production (1948) 39,000 metric tons.

Foreign Trade. (Million rials, 1949; 1950, six months, in brackets) Imports 9,276 (5,050); exports, including oil exports of the Anglo-Iranian company 17,240 (6,680). Main sources of imports (1949): U.K. 40%; U.S. 28%; India 5%. Main destinations of exports: U.K. 24%; India 15%; Italy 5%. Union of South Africa 5%. Main imports

(1949); cotton piecegoods 18·6%; cereals 9·7%; sugar 9·3%; tea 7·4%. Main exports: petroleum and products 90%; carpets 3%; fruits and berries 2%.

Transport and Communications. Roads (1949): 17,000 mi., of which 8,000 mi. are suitable for vehicles. Licensed motor vehicles (Dec. 1949): cars 10,680; commercial 9,140. Railways (1948): 1,750 mi. Wireless licences (1949): 60,000.

Finance and Banking. (Million rials) budget: (1949-50 est.) revenue 7,705, expenditure 11,119; (1950-51 est.) revenue 8,948, expenditure 11,474. Internal national debt (Dec. 1948) 5,400. Currency circulation (March 1949; March 1950 in brackets): 6,640 (6,030). Monetary unit: *rial* with an exchange rate (Nov. 1950) of 90·30 rials to the pound.

See G. Lenczowski, *Russia and the West in Iran* (Ithaca, U.S., 1950).

PERU. South American west-coast republic, bounded N. by Ecuador and Colombia, E. by Brazil and Bolivia, and S. by Chile. Area: 482,258 sq.mi., including islands in the Pacific. Pop.: (1940 census) 7,023,111; (mid-1949 est.) 8,204,000. The racial distribution is estimated approximately at 52% whites and *mestizos* and 46% Indians; there were also some Asiatic and Negro elements. Religion: mainly Roman Catholic. Language: Spanish, but Indians speak only Quechua or Aymará. Chief towns (pop., 1945 est.): Lima (cap., 657,824); Callao, the main port (93,313); Arequipa (87,260); Cuzco (49,760). President of the republic, General Manuel A. Odría.

History. The military junta, which took over the executive power in Oct. 1948, continued its reform programme and made definite progress toward an economic and fiscal restoration, particularly after the sol, the unit of currency, was left to find its own level in Nov. 1949. The decree of the junta of Jan. 8, 1949, which suspended the congress and announced the assumption by the cabinet (appointed by the junta) of all executive and legislative authority was modified in 1950 to provide for the restoration of parliamentary government. In accordance with this decision of the junta an election followed on July 2, 1950. General Odría was elected president of the republic. Before the election the cabinet was composed of army officers; with the restoration of parliamentary government, the departments of Foreign Relations, Treasury and Commerce, Interior and Police, as well as Agriculture, were placed under civilian officials. The Aprista party, outlawed in 1948, was unable to rebuild the left-wing movement. Their leader, Víctor Raúl Haya de la Torre, had remained a refugee in the Colombian embassy in Lima since Jan. 1949. (*See* COLOMBIA; INTERNATIONAL COURT OF JUSTICE.) (S. D. L. R.)

Education. Schools (1948): primary, public and private 10,239, pupils 908,695; secondary, public 103, pupils 37,256; secondary, private (mostly Roman Catholic) 100. Universities: four state (Lima, Arequipa, Cuzco and Trujillo) and the Catholic university of Lima.

Agriculture. In 1949 about 3,800,000 ac. out of a total arable area of 29,500,000 ac. were under cultivation. Production of cotton, the chief export crop, was about 73,400 short tons in 1949. Sugar output, 543,514 short tons. Rice production (milled) was about 110,000 short tons. Livestock estimates (1948) showed 2,661,995 cattle, 17,287,624 sheep, 962,471 goats, 776,941 pigs and 2,449,746 alpacas and llamas.

Mineral Production. Output of raw materials (1949): copper 26,250 short tons; silver 10,888,000 oz.; gold 118,950 oz.; lead 62,750 short tons; zinc 74,850 short tons; crude oil 14,796,093 bbl.

Foreign Trade. (Million soles, 1949) export 2,107·5, import 2,692·1. Chief exports: cotton (29%), sugar (16%), petroleum and products (15%) and copper (6%). Principal customers: U.S. (29%); Chile (17%); U.K. (15%). Chief suppliers: U.S. (63%); U.K. (9%); Argentina (5%).

Transport and Communications. Railways (1947): 2,612 mi. Roads (Dec. 31, 1949): 19,468 mi., including 7,903 mi. hard-surfaced. Motor vehicles (Dec. 1949): cars 25,148, lorries 17,687, buses 2,511. Merchant marine had 43 steamers and motor-ships (100 tons and over) aggregating 88,164 gross tons on June 30, 1949.

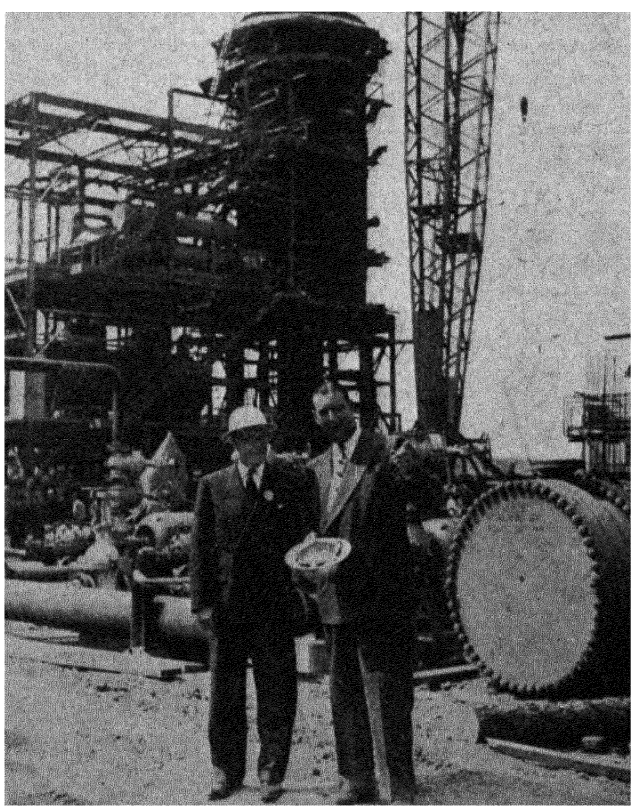
Finance. (Million soles) budget: (1949 actual) revenue 1,175·2; expenditure 1,140; (1950 est.) balanced at 1,644·5. National debt (Dec. 31, 1949): external 447·4; internal consolidated 549·6; internal floating 624·9. Notes in circulation (Oct. 31, 1950); 894. Sight deposits (Aug. 31, 1950): 1,265. Monetary unit: *sol* with an exchange rate (Oct. 1950) 43·85 soles to the £ and 15·66 soles to the U.S. $. (J. W. Mw.)

PETROLEUM. Demand for petroleum products in 1950 was higher than in any previous year, and production was also at record levels. The year 1949 had been marked by a slight drop in oil consumption after some years of expansion, but this was due not to dearth of oil but to financial and economic problems troubling the world generally, problems which, though still existent, were sensibly diminished in 1950. It is true that the outbreak of war in Korea stimulated the rate of oil demand during the latter half of the year, but the trend had already been established as a result of the revival of industrial activity in the United States and of the steady progress achieved by Great Britain and other European countries towards economic rehabilitation.

Figures for the first six months of 1950 showed a total world output of 1,760 million barrels of crude oil—substantially above the corresponding production of 1,691 million bbl. in the first half of 1949. It was, moreover, practically certain that production figures for the second half of 1950 would well surpass the figure for the first half of the year.

As in former years, the U.S. was the most important source of oil, supplying more than 50% of the total output in the period Jan.-June. Although U.S. production, at 910 million bbl., created a record for the six months of any year, it was a smaller proportion than usual of the world total, of which in past years the U.S. supplied about 60%. Other leading producers in the first half of 1950, in order of output, were Venezuela, U.S.S.R., Persia, Saudi Arabia, Kuwait, Mexico, Indonesia and Iraq. Output in all these countries exceeded that for the corresponding period of 1949, except in Saudi Arabia (where, however, production increased sharply in the middle of the year). Rumania, Argentina and Bahrein showed reductions in output, but only Rumania showed an appreciable falling off—of over 8%.

The most outstanding developments occurred in the middle east, where total production was raised by nearly 16% during the first half of 1950 compared with the corresponding period of 1949. Iraq's output (equivalent to



Philip Noel-Baker (wearing helmet), minister of fuel and power, visiting the refinery for the Anglo-American Oil Company being built at Fawley, Hampshire.

42 million bbl. a year) was almost doubled, owing to the opening of a new 16-in. pipeline from Kirkuk to Tripoli in Aug. 1949. Persia (production at an annual rate of 242 million bbl.) and Kuwait (113 million bbl. a year) showed increases of 18·5% and 25% respectively over the corresponding figures for Jan.-June 1949. From Saudi Arabia a considerably higher output was expected with the completion during 1950 of the Trans-Arabian pipeline, with an initial annual capacity of 110 million bbl. Oil shipments from the Mediterranean terminal of this pipeline began towards the end of 1950.

Intimately linked with this rise in middle east crude oil supplies was the expansion of European refinery capacity, planned for completion in 1952-53. The middle east was scheduled to supply almost 80% of oil imports into countries of the Organization for European Economic Co-operation within a few years. In Europe as a whole, the O.E.E.C. countries planned to handle about 450 million bbl. of crude oil in 1952-53.

In striking contrast with this expansion of refining capacity, western Europe showed negligible oil production. The only large producers were the U.S.S.R. and Rumania, from neither of which was it possible to obtain reliable oil statistics. Towards the end of 1949, however, it was reported that the Soviet oil industry had attained its target of production under the fourth five-year plan, to finish in 1950, at the rate of almost 250 million bbl. a year. The estimate of Soviet production, made during the first half of 1950, was of an annual rate of about 265 million bbl. Oil drilling continued in Italy but in 1950 led to no large-scale production. In July the Italian government announced the foundation of the Istituto Nazionale Idrocarburi.

In the western hemisphere, the most remarkable features, apart from the revival of U.S. production, were a corresponding increase in output in Venezuela, where the oil industry was largely dependent on U.S. markets, and the continued development of Canada's oil industry. Venezuelan production for the first half of 1950 was at an annual rate of 510 million bbl.—slightly above the previous peak. Three new refineries were intended to increase Venezuela's exports of refined products at the expense of less valuable crude oil exports. The other South American countries generally showed higher output, and the slight decline in Argentina's production was counter-balanced by the announcement, in the autumn, that oil had been found in the Argentinian half of the island of Tierra del Fuego, though it was too early to assess the importance of that find.

The development of Canadian resources was for a time retarded by the distance separating the oilfields from the main markets in the industrial eastern region. But the first section of a great pipeline from Alberta, to join Edmonton to the Great Lakes, came into operation towards the end of 1950. The section was some 450 mi. long; when the whole 1,150-mi. line was completed, it would deliver 95,000 bbl. of oil daily—almost 35 million bbl. annually and substantially more than Canada's existing annual production of about 23 million bbl. Progress in Canada was thus the most prominent event in the Commonwealth during 1950, but there was a further rise in production in British Borneo, which, with its output during the first half of the year at an annual rate of 28 million bbl., remained the Commonwealth's largest producer. (K. W.)

PHARMACY. Action was taken in 1950 to produce increased uniformity in the nomenclature of drugs and medicines. The World Health Organization Expert Committee on the Unification of Pharmacopoeias met twice and gave final approval to the material that they had prepared for the first *Pharmacopoea Internationalis* (Ph.I.). The committee decided that there should be an English and a French edition, to be published early in 1951, followed by a Spanish edition. The pharmacopoeia would describe drugs in common use, and the W.H.O. recommended that Ph.I. names, standards and doses should be adopted by the authorities responsible for national pharmacopoeias. The committee also took the initial steps in a plan under which W.H.O. would take steps (i) to give non-proprietary names to new drugs, if possible before they were on the market, and (ii) to prevent the creation of a multiplicity of non-proprietary names.

A new *United States Pharmacopoeia*, the 14th revision, was published in 1950. It contained over 40 new synthetic and antibiotic substances. To devise standards for drugs used in veterinary medicine the Pharmaceutical Society of Great Britain put in hand the production of the *British Veterinary Codex*, to be published in 1952.

The war in Korea had a small effect on the supply but a pronounced effect on the price of menthol and camphor. Other outstanding price increases were of ergot, of which there seemed to be a world shortage, of ipecacuanha (the source of emetine) and of bismuth preparations.

The rising cost of medicines dispensed under the national health service in Great Britain, from an average per prescription of 2*s.* 9½*d.* in 1949 to 3*s.* 1¼*d.* in the first six months of 1950, led the government to halve the allowance on bottles and containers and to reduce the sum paid to chemists in respect of drugs. The latter action was taken without full discussion with the chemists and their resentment was shown in Scotland and Northern Ireland by a threat to withdraw their services on Dec. 1. Shortly before this date agreement was reached and the notices were withdrawn. In England and Wales an enquiry into dispensing costs was begun by the National Pharmaceutical union. The government also sent to all doctors a list of proprietary medicines advertised directly to the public with the strong recommendation that these should not be prescribed under the health service. Altogether, the cost of the pharmaceutical service for England, Scotland and Wales in the year which ended on March 30, 1950, was about £34 million against an estimated cost of £20·8 million.

The first clinical trials of a new antibiotic, terramycin, prepared from *Streptomyces rimosus*, were reported. Chloramphenicol (chloromycetin), the first antibiotic to be prepared synthetically on a large scale, was released for general distribution on prescription in Great Britain at the end of the year. (*See* also SURGERY.) (W. K. F.)

PHILATELY. The philatelic event of 1950 was the international stamp exhibition in London, organized by the Royal Philatelic society and the British Philatelic association under the patronage of King George VI, who exhibited part of the royal collections and was an interested visitor. Exhibitors also included the former King Carol of Rumania, the Brazilian ambassador in London (J. J. Moniz de Aragão) and many other leading philatelists, the resultant display being the finest ever assembled. The Grand Prix was awarded to a British philatelist, H. C. V. Adams, for a collection of British stamps. Other important exhibitions were held in Melbourne, Madrid (for the centenary of first Spanish stamps), Buenos Aires (for the San Martin centenary), Canterbury, New Zealand (for its centenary), Leipzig and Johannesburg.

The annual convention of the American Philatelic society took place at Washington; at the American Air Mail society's convention in Philadelphia the Lagerloef trophy went to Mrs. Louise Hoffman.

The 32nd Philatelic Congress of Great Britain, at Tunbridge Wells, added J. Schmidt-Andersen (Denmark), Ibrahim Chaftar Bey (Egypt), P. Morel d'Arleux (France), W. H. C.



A selection of Holy Year postage stamps issued in 1950. 1-3, Vatican; 4, Italy; 5, Republic of Ireland; 6, the Saar.

Bromfield (Australia), R. W. T. Lees-Jones and H. W. Bessemer (G.B.) and Stanley B. Ashbrook and Lester G. Brookman (U.S.A.) to its roll of distinguished philatelists.

Sir John Wilson, keeper of the royal philatelic collections and chairman of the London exhibition, was appointed a C.V.O. He was succeeded as president of the Royal Philatelic society by H. W. Edmunds. The Crawford medal of the society went to F. E. Wood, the Tilleard medal to Gerald Wellburn of Vancouver.

Death took a heavy toll of leading philatelists, among them Saul Newbury (U.S.A.), a keen student of Brazilian stamps; J. B. Seymour and Bertram McGowan, famous collectors of British issues; Louis E. Bradbury, the expert on Bahamas stamps; and Louis Yvert, a leading French philatelic publisher.

New stamps of the British Commonwealth included sets for Sarawak, Barbados, Mauritius and North Borneo and a British 4*d.* stamp in blue (conforming to the Universal Postal union's regulations, which had long been disregarded by the British post office). New Zealand Health stamps, portraying Princess Elizabeth and Prince Charles, proved very popular.

From other countries came further issues for the 75th anniversary of the U.P.U. and some linked with the Holy Year celebrations. The United States honoured railroad engineers by a stamp portraying the famous Casey Jones. Among events commemorated were the 400th anniversary of Helsinki (Finland), the 41st anniversary of Korean independence; the Bach centenary (Germany); the inauguration of the republic of India; the 9th centenary of Oslo (Norway); and the U.N.E.S.C.O. conference (Italy).

The stamp market was strong in all countries, though certain issues which had been the medium for wartime speculation fell in value. Outstanding "finds" of the year included a sheet of the Shihr and Mukalla R.1 U.P.U. stamp with the surcharge missing and British stamp booklets containing imperforate 2*d.* and 2½*d.* stamps.

Considerable interest was aroused by the decision of the British post office that British stamps overprinted for use by the middle east forces and at Tangier could be used for postal purposes in the U.K.

The Fédération Internationale de Philatélie published a strong manifesto against the issue of unnecessary postage stamps designed to obtain money from collectors; and it announced a ban on certain issues.

Spain instituted two prizes for stamps of the highest artistic merit, the first awards going to Switzerland (Pro Juventute series, 1948) and the Vatican City (air stamps, 1949).

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PHILIPPINES. Island republic lying about 500 mi. off the southeast coast of Asia; an archipelago of 7,107 islands extending N. and S. about 1,152 mi. and E. and W. about 688 mi. Eleven islands have an area of over 1,000 sq.mi., the largest being Luzon (40,814 sq.mi.) and Mindanao (36,906 sq.mi.). Total area: 115,600 sq.mi. Pop.: (1939 census) 16,000,303; (1948 census) 19,234,182. In 1939 the population included 117,500 Chinese and by official count their number was 140,000 by 1948, but the actual full-blooded Chinese population exceeded 200,000. There are 43 identifiable ethnic groups in the islands but the dominant stock of the population is Malayan; the aborigines of the archipelago are akin to the Australian blacks and Papuans. The term "Filipino" in Spanish times meant the same as creole, that is, an island native of Spanish descent. Language: English (spoken by about 5 million), Spanish (about 500,000) and some 87 dialects of which 8 or 9 were spoken by 90% of the people; Takalog, spoken by about 3·5 million, was declared the national language. Religion: mainly Roman Catholic (about 80%), but there were also about 1·8 million followers of the Independent Filipino (Christian) Church, about 425,000 Protestants of all sects, 800,000 Moslems (the Moros of Mindanao) and almost 700,000 pagans widely scattered. Chief towns (pop., 1939 census): Manila (cap., 623,492; 1949 est., 1,300,000); Cebu (146,817); Zamboanga (131,455); Davao (95,546); Iloilo (90,480). President of the republic, Elpidio Quirino.

History. Early in the year President Quirino's budget estimates for the fiscal year 1950-51 brought to light serious deficits which had been accumulating since 1946. Inadequate levying and inefficient collecting of taxes had not produced enough revenue to administer a country with a rapidly increasing population which was still faced with serious problems of war rehabilitation. Increased expenditures upon education, extraordinary expenses connected with quelling agrarian unrest and the decline of customs revenues following the imposition of drastic import controls were the specific factors crystallizing these financial problems. It became clear, in the course of the year, that inefficiency and corruption within the government together with financial maladministration, had brought the administration almost to the brink of bankruptcy in a country with an abundance of resources.

President Quirino had foreseen difficulties and early in the year invited the United States to carry out an economic survey to propose remedial measures. During the summer of 1950 the Economic Survey mission, headed by Daniel W. Bell, studied the situation. In October its report recommended some fundamental changes in government administration that, in the course of several years, could materially

improve conditions for the islands as a whole. The Bell report was well received by private citizens in the islands who had become discouraged by their government's inability to settle its problems.

On the international front the Philippines took a forward step by inviting the nations of southeast Asia to participate in a conference upon common problems. Australia, Ceylon, India, Indonesia, Pakistan and Thailand accepted. The seven-nation conference met in May at Baguio and reached mutual agreement upon common problems, though no formal organization of southeast Asian countries resulted. The 1947 Philippine military treaty with the United States, due to expire in 1951, was extended until 1953.

As 1950 began, agrarian difficulties were worse than before. Resettlement programmes and the provision of new lands during 1949 proved insufficient, for these efforts barely kept pace with the increase of needs among a rapidly growing population. Military attempts to dispel the Communist-led elements using the agrarian problem as their spearhead made no lasting progress. At the end of 1949 dissident forces were thought to number as many as 25,000 men, including some Chinese, who ranged throughout most of Luzon.

Early in the year 1950 the Philippine constabulary was returned to its regular police tasks, and the duty of combating the " Huks " was assigned to the army. During March, in celebration of the eighth anniversary of the founding of the Hukbalahap, extensive guerrilla raids were made upon many Luzon towns and cities. At this time, also, the name of the organization was changed to Hukbong Mapagpalaya Sa Bayan (Nation's Liberating Forces). This change clearly indicated that agrarian reform, as such, was not the real aim of the dissident group. By July, in Nueva Ecija province in central Luzon, more than 100,000 village farmers had moved into the towns and cities for protection, considerably lessening the cultivation of rice lands throughout the province. Enlarged government programmes were started to provide land in Mindanao, but again these programmes seemed neither to attack the heart of the problem nor to promise lasting results. By the end of the year the army had made some progress in reducing guerrilla activities, but no real advance toward eliminating them. During the latter half of the year popular opinion throughout Luzon began to turn against the " Huks," as they still were known, and to support the government's efforts to suppress the dissidents and to solve the agrarian and Communist problems.

Education. (1949) all state schools 18,810, pupils 3,850,217, teachers 72,736; all private schools 1,684, pupils 361,879. University of the Philippines (1948): students 5,417.

Agriculture. Production was higher than during 1949, and the expansion of agriculture produced the largest crop of rice to date, about 2,800,000 tons, still not an ample supply for the islands. Coconut, sugar, manila hemp, tobacco and pineapple crops improved but still fell short of providing adequate exports.

Foreign Trade. (Million pesos, 1948; 1949 in brackets). Imports 1,016·7 (1,079); exports 635·8 (519).

Finance. (Million pesos) budget: (1948-49 actual): revenue 270, expenditure 349; (1949-50 est.) revenue 304, expenditure 302·7. Most of the organized aid contributed to the Philippines by the United States was terminated during 1950. The Bureau of Public Roads and the War Damage commission were the only U.S. agencies carrying their activity forward into 1951. War Damage commission payments during the year amounted to about $250 million. Much of the aid given by the U.S. went to individuals rather than to government or to operating and producing organizations. Currency circulation (March 1950): 577. Monetary unit: *peso* equivalent to U.S. 50 cents.

(J. E. Sp.)

PHILOSOPHY. During 1950 certain tendencies were noticeable in the form of shifts of emphasis. First, the analytic philosophers concentrated more upon analysing the language used in the sciences than upon that used in philosophy; secondly, interest in linguistic questions, which had been mainly confined to Great Britain, the United States and the Netherlands, spread to Italy, the U.S.S.R. and Japan; and thirdly, in the U.S. and Great Britain, where positivist views have been strongest, the opposing group of speculative philosophers raised their voices, so to speak, by founding new journals.

Important discussions in the field of the analysis of scientific language were initiated by P. W. Bridgman's lectures at University college, London, during April. Bridgman spoke on " The Nature of some of our Physical Concepts " and suggested that, if the " operational " technique is applied to such concepts, it involves a distinction between physical operations which are " instrumental " and those which are of the " paper-and-pencil " type (*i.e.*, mental). Examples of these latter are the conservation laws of physics, which, though they cannot be interpreted directly in terms of " instrumental " operations, may be said to act as methodological guides to such operations. The general question of the influence exerted by the scientist's philosophical attitude towards his concepts upon the direction and type of his researches was very much in the air. Thus the Institut International des Sciences Théoriques offered a prize for an essay on Eddington's conception of the philosophy of physical science. Again, as a result of the publication, late in 1949, of a volume in the " Library of Living Philosophers " (Evanston, U.S.) on *Albert Einstein: Philosopher-Scientist*, there was some discussion of Einstein's contention that the problem of the double (quantum-and-wave) nature of all corpuscles is not satisfactorily solved by the statistical quantum theory. Einstein's view was that it should be possible to give " a complete description of any (individual) real situation (as it supposedly exists irrespective of any act of observation or substantiation)." On the other hand, such physicists and philosophers as Wolfgang Pauli, Neils Bohr, Henry Margenau and Max Born maintained (in Einstein's words) " that a theoretically complete description of a system can, in essence, involve only statistical assertions concerning the measurable quantities of this system." Indeed, as was made clear in Born's Joule Memorial lecture on " Physics and Metaphysics " (reprinted in *Penguin Science News*, no. 17), what was involved was a disagreement as to the nature of " physical reality " between the majority of physicists of all countries—who accept the implications of quantum theory when combined with Bohr's explanatory principle of complementarity—on the one side and Einstein and Planck—the two men who perhaps contributed most to the original development of quantum theory—on the other.

In France the second number of the *Bulletin de l'Académie internationale de philosophie des sciences* was devoted to a symposium on a similar subject (" Les Sciences et le réel "). In Great Britain there was founded the *British Journal for the Philosophy of Science*, which promised to publish P. W. Bridgman's lectures (mentioned above) and printed, in its first two issues, an article by Philipp Frank on " Metaphysical Interpretations of Science." Edward Arthur Milne, who had been a member of the journal's editorial board and whose work on cosmological theory had been parallel to Eddington's though not in agreement with it, died on Sept. 21 (*see* Obituaries).

The " mind-body " problem was widely discussed in connection with Gilbert Ryle's *Concept of Mind* (London, 1949); while the mechanics and the formalization of reasoning were investigated by Jean Piaget in the three volumes of his *Introduction à l'épistémologie génétique* (Paris, 1950), an extended application of the ideas already put forward in his *The Psychology of Intelligence* (1947; Eng. translation, London, 1950) and in his *Traité de logique* (Paris, 1949). Piaget's main contention was that the act of intelligence consists in " grouping " operations according to certain

definite structures. His ideas were thus consistent with those of P. W. Bridgman in their suggestion that we should describe our theories in terms of what we " do " rather than in terms of " things."

The symposium on " Les Sciences et le réel " mentioned above was a symptom of an increased but not a predominant interest among French philosophers in the metaphysics of science. As Emile Bréhier pointed out in his *Transformation de la philosophie française* (Paris, 1950), French philosophy had tended latterly to cease discussing the axiomatic foundations of the sciences and to discuss instead the individual—*l'homme engagé*—with an emphasis on appeal to the transcendent and to subjective principles. Indeed, in France, philosophers continued to " speculate " in all fields of knowledge. Accordingly, the question of Soviet prison camps was discussed by such as Jean-Paul Sartre and Maurice Merleau-Ponty. Sartre's own existentialist philosophy was attacked by Marxists for being Catholic, and by Catholics for being based on Marxism. On the other hand Gilbert Varet in *L'Ontologie de Sartre* (Paris, 1950) traced its foundations, as is more usual, to Edmund Husserl. Husserl's ideas were widely discussed in the philosophical journals, and his main work was translated into French under the title *Idées directrices pour une phénoménologie* (Paris, 1950). The late Simone Weil's *L'Enracinement* (Paris, 1949) aroused very general interest as a "*prélude à une déclaration des devoirs envers l'être humain.*" Her last posthumous work, *La Connaissance surnaturelle* (Paris, 1950) expounded the metaphysical and mystical foundations of her beliefs. The Christian existentialist Gabriel Marcel was invited to England to deliver the Gifford lectures and chose as his theme " Research into the Essence of Spiritual Reality."

In Germany and Austria also interest was still concentrated chiefly on metaphysics, though Victor Kraft in Vienna published a history of the original Vienna circle, *Der Wiener Kreis* and an *Einführung in die Philosophie*, which took a modified positivist view. Karl Jaspers, who also published an introduction to philosophy in 1950 and whose *Perennial Scope of Philosophy* appeared in English (London), inspired discussion of the philosophy of history with his *Von Ursprung und Ziel der Geschichte* (Munich, 1949) and wrote an appraisal of Nietzsche on the half centenary of his death; in his view, Nietzsche, Marx and Kierkegaard were the three metaphysical thinkers of the 19th century whose influence has been predominant in the 20th. Martin Heidegger published *Platons Lehre von der Wahrheit* (Berne) and a collection of essays, *Holzwege* (Frankfurt); and the first English translation of his *Sein und Zeit* was issued in the U.S.

There was also a general revival of philosophical activity in Germany, and numbers of new societies were formed and old societies re-formed. An amalgamating society held its first meeting during the course of the 3rd Congress of Philosophy, held in Bremen in October; among the subjects discussed at the congress were " Might and Right," " Historical Materialism and the Problem of Ideology," " The Problem of the External World " and " Existentialism."

In Italy a minority movement set up a centre of methodology and language-analysis in Milan, with an associated journal *Methodos;* the majority of philosophers remained however devoted mainly to such subjects as Crocean idealism, Marxism, existentialism, etc. A distinguishing feature of the centre in Milan was that many of its members were not professional philosophers. The same applied to the Institute for the Science of Thought, in Japan, which had declared its purpose as " to deal with philosophical problems by non-philosophical methods "—in particular by a study of language habits. This institute carried out an investigation into the reasons why philosophy is pre-eminently a popular study in Japan and concluded that it was so partly because the ideograph for " philosophy " was made up of the ideographs for " exquisite study."

In the U.S.S.R. scientists and philosophers began the task of working out the philosophical implications of Stalin's pronouncement upon N. Y. Marr's linguistic theories, on the assumption (to quote Serghey Vavilov, president of the Academy of Sciences) that " a scientist in any branch of knowledge may draw . . . . conclusions of paramount importance directly for his own work." However, in other respects, Marxist philosophy continued along unchanging lines. For instance Todor Pavlov, author of an important work on the dialectical materialist theory of knowledge, published in Sofia an article criticizing theories which suggest that the microcosm studied by physicists does not objectively exist. Again, *The Modern Quarterly* (London) reprinted an article originally published in Vienna, whose title was " The Development of Idealist Philosophy from Mach to Heidegger." There was also published a new Soviet history of philosophy, to replace that by Gheorghy Aleksandrov, which had been withdrawn in 1947 as " falsely objective "; an English translation was announced for publication in the U.S.

Two important new journals, both proclaiming a preponderating interest in metaphysical questions, were founded: in the U.S. the *Review of Metaphysics*, edited by Paul Weiss from Yale university; and in Scotland *The Philosophical Quarterly*, edited by T. M. Knox from the University of St. Andrews. The newly formed Metaphysical Society of America held its first congress in April. At an opposite extreme there was also founded *Philosophical Studies*, edited by Herbert Feigl and Wilfred Sellars from the University of Minnesota and devoted primarily to philosophical analysis.

Alfred Korzybski, the founder of the Institute of General Semantics in the U.S., died on March 1. Field Marshal J. C. Smuts, who died on Sept. 11, had been an advocate of holism, a theory similar to that of emergent evolution. Emmanuel Mounier, one of the leaders of personalism in France and the founder of the journal *Esprit*, died on March 22. (For the latter two *see* OBITUARIES.)

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(R. C.-W.)

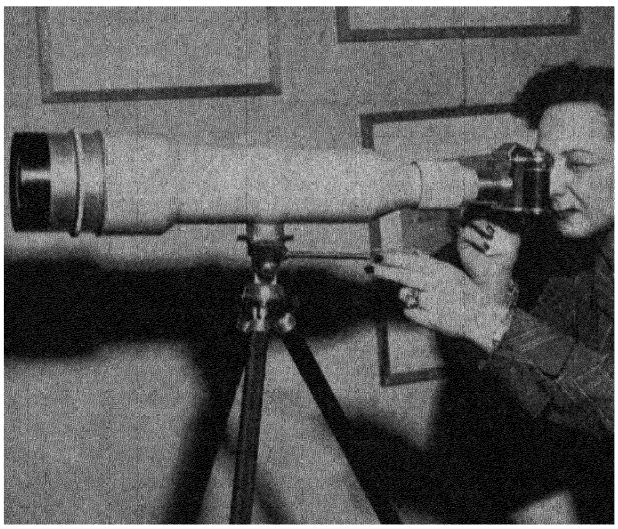
PHOLIEN, JOSEPH, Belgian statesman (b. Liége, Dec. 28, 1884). He practised as a lawyer, enlisted in 1914 in the Belgian army as a volunteer and was demobilized as first lieutenant. He entered politics in 1936 when as a right-wing Social Christian he was elected to the Senate. He was minister of justice in the Spaak coalition cabinet (May 1938-Feb. 1939). At 56, he rejoined the army in 1940. During the second German occupation he remained in Belgium and was thrice arrested for protesting against German interference in Belgian administration. With Albert Devèze, minister of state, and Raoul Hayoit de Termicourt, attorney general at the Supreme Court of Appeal, he signed on June 1, 1940, a legal pronouncement declaring that King Leopold (*q.v.*) was a prisoner of war and as such unable to reign—a document which gave legal basis to the Belgian government in exile. From 1945 he strongly supported the king's unconditional return. The settlement reached on the " royal question " (*see* BELGIUM) aroused considerable opposition inside the Social Christian party and Pholien led the Leopoldists accusing Jean Duvieusart (*q.v.*), the prime minister, and some of his colleagues of lack of courage and energy. After the resignation of Duvieusart, Pholien formed on Aug. 15 a new Social Christian government.

PHOTOGRAPHY. There was no spectacular progress in either photographic apparatus or materials during 1950. The growing use of electronic flash illumination, particularly in colour photography, had emphasized the necessity for accurate measurement of this high-speed illumination. In the United States a new light meter was produced which measured the total amount of light emitted by electronic flash tubes and thus enabled the operator to determine accurately the correct exposure, to establish the correct ratio between main and fill-in lights and generally to check the condition and output of his apparatus. With an accessory probe it was also possible with this device to measure the illumination on the focusing screen. The meter was calibrated to read directly in lumen-seconds per square foot and operated for any flash duration from 1/10,000th sec. The production of this apparatus was a notable advance in electronic flash technique.

The use of fluorescent tubes as a light source for enlargers continued to increase. The leading U.S. makers of enlargers now supplied lamp housings containing either grids or coils of fluorescent tubes providing a uniform source of "cold" light of high actinic power. One of the latest developments in this field was sold by Graflex who supplied an accessory to slide on to the back of the well-known Pacemaker Speed Graphic camera, thereby converting it into an enlarger. This accessory contained both a fluorescent light unit and a negative holder. A stand was provided so that the enlarger could be used either horizontally or vertically. Speed Graphic cameras were now provided with a new back which would take all the accessories designed for this camera. Hitherto it had been necessary to use the camera with one of two different types of back, each taking only certain accessories.

A new version—Model 11—of another well-known American press camera, the Kalart, appeared. Among new features were a built-in remote control outlet, permitting the operator to work away from the camera or to include himself in the picture, and a combined direct-vision rangefinder and viewfinder, in addition to the luminous-frame viewfinder already provided. The Polaroid Land camera which produced a print within a minute of exposure was further improved by the provision of a new sensitive material which gave a black-and-white image in place of the previous sepia one which was not to everyone's taste. This unique camera had proved more popular than was anticipated and many special uses had been found for it. For example it was widely used in the Hollywood studios for recording make-up, the position of actors and actresses at the end of a shot, the way in which the sets were dressed and so forth. With the conversion of many industries to rearmament it began to be used extensively for producing identity photographs "while you wait" and as the camera was fitted with contacts for synchronized flash with the popular midget flashbulbs was often used indoors. The Fairchild corporation, in conjunction with the Polaroid Land corporation, placed on the market a special model of the Land camera adapted for taking photographs of oscillograph tube traces which could be studied within a minute of being taken. With the growing use of oscilloscopes in laboratories and factories for the examination of transient effects it was of great importance that such photographs should be finished as soon as possible, particularly when adjustments had to be made as the result of such examinations. With the new apparatus a series of experiments which hitherto took several days, owing to the delays incurred in developing and printing the trace photographs, could be completed in an hour or two.

In the field of colour photography the Eastman Kodak company introduced a new print film known as Kodak Ektacolor print film, designed specifically for making duplicate colour transparencies from colour negatives. With this



A new long-focus telephoto lens, fitted direct to a tripod, exhibited at the 1950 Milan fair.

the amateur could shoot a colour negative on Ektacolor film, process it himself and from this produce as many positive transparencies as desired, all of uniform quality. The resulting transparencies appeared to be fully the equal of any taken direct on Kodachrome or Ektachrome. The new film was available in 10-sheet packages ranging from 4×5 in. to 16×20 in., thus enabling enlargements to be made.

The American General Electric company introduced a new electronic flash tube known as the F.T.110. This was a U-shaped tube designed to be sealed into a bulb which contained its own specially designed reflector. The special feature of this tube was its design specifically for full loading at 100 w./sec. (100 joules) and at the comparatively low figure of 1,000 volts. It was claimed that it gave 75% more light output than previous tubes operating under the same conditions. Several manufacturers had already incorporated this new tube in their portable electronic flash equipments.

For use with the ordinary consumable flash bulb a number of manufacturers produced "battery-capacitor-type" units. Hitherto two or three small 1½-v. unit cells had been used to fire the bulbs but with the new device a very small battery of about 22 v. or 23 v. similar to those used in deaf aids charged a capacitor or condenser. When this capacitor was discharged a strong pulse of current was sent to the flash bulbs and fired them. The capacitor then re-charged and was ready for a further discharge practically as soon as the bulbs were changed. The special advantage of this system was that the pulse of current given by the capacitor was far greater than that from the cells previously used, enabling several bulbs to be fired simultaneously and also long extension leads, which hitherto had needed more powerful batteries, to be used. The size and the weight of these units was almost the same as those of the cells they replaced, but the battery life was much longer.

In Europe there were a number of developments in camera manufacture, Germany, as might be expected, endeavouring to restore as quickly as possible its prewar trade in this type of apparatus. There were no sensational improvements, but minor refinements were introduced everywhere. Leitz produced a new model known as the Leica 111 F. While generally this followed the lines of previous models its particular feature was a built-in flash synchronization for all shutter speeds up to 1/1000 sec. with a synchronizing dial which could be set for any millisecond delay from zero up to 25. The exterior flash unit slid into the ordinary accessory clip and weighed only 9½ oz. including batteries and a new

reflector which folded up like a fan. A socket on the back of the camera took the plug of the flexible lead from the unit. Another feature of the new model was a film speed indicator built into the winding knob. This could be set for various film speeds for black-and-white or colour so that the user was immediately reminded of what film was in the camera at the moment.

Leitz also introduced a number of new Leica accessories most important of which was the new bellows focusing device which provided a continuous method of focusing near objects, eliminating the time-consuming use of different spacer rings or extension tubes. With the new bellows arrangement any ratio, magnification or reduction was possible within the range of the Leica lens, the magnification or reduction being read off on a scale at the base of the attachment. With the existing reflex device fitted between the bellows and the camera, or alternatively a focusing slide, visual focusing could be effected.

While the original Zeiss Ikon factory remained in the Russian zone and continued to produce the Contax " S," the company's Stuttgart works in the U.S. zone produced the Contax 11a—an improved version of the well-known Contax 11. It had the same shape as its forerunner but was slightly shorter and considerably lighter. The combined viewfinder and rangefinder remained although the base of the rangefinder was shortened so as to bring both rangefinder images permanently in view. The removable back and bayonet-fitting lenses were retained but the tripod bush was moved to the body of the camera and was no longer attached to the back, thus removing a previous weakness. The shutter was entirely re-designed and was quieter in operation and the speed indicator was easier to set. There was built-in synchronization for consumable flash bulbs as well as for electronic flash, and the cable connection to the rear of the camera utilized a screw-in plug. Still more modestly priced 35-mm. cameras were introduced, some having coupled rangefinders. The popularity of these cameras in Germany was undoubtedly due to the fact that natural colour film was available at reasonable prices in this size.

The 35-mm. camera was also popular in both France and Italy. In France an improved model of the Foca camera was in the precision class and had a very large sale. In Italy the Rectaflex was introduced—a 35-mm. single reflex camera with eye-level focusing through an eyepiece by means of a prism. This camera had several interesting features, notably a unique optical device built into the focusing screen which enabled extremely accurate focusing to be effected. A large number of accessories were made available for this camera, which displayed a quality of workmanship at least equal to anything produced in Germany. Indeed a notable development in continental photography was the progress made in high-quality cameras by the Italian photographic industry.

In Great Britain progress was mainly along the lines of increased production of well-known models. Some new high-quality cameras in the medium-price range created an excellent impression and were able to compete both in price and quality with the best continental productions. There was little progress in the 35-mm. field in spite of the availability of colour film of this size from two different British makers. A new single-lens direct-vision-type 35-mm. reflex camera similar to the German Contax " S " was shown for the first time at the British Industries fair in April 1950 but by December this had not reached the dealers. The popularly priced Ilford Advocate 35-mm. camera remained the only British-made 35-mm. camera available to the public. A novel clinical camera—the Dyce—taking 35-mm. film was introduced at the British Industries fair. It was designed primarily for close-up work and was fitted with long extension bellows so that focusing could be set from 3 in. to infinity. In the closest position the image was twice its actual size on the film and to get adequate depth of focus in such circumstances the lens could be stopped down to f/96. Surrounding the lens in a deep hood an electronic-flash source of light was provided. This placing of the light source, together with its high intensity, allowed very small stops to be used and the resulting depth of field assured sharp reproduction over a comparatively large area. In dental work, for example, the whole of the mouth, including the throat, tongue and back teeth, could be photographed on Kodachrome with good definition. The camera was mounted and fully balanced on a very heavy pillar stand which was adjustable in all directions. At the same exhibition a new Dawe electronic press camera was shown. This included a built-in synchronized electronic flash unit, coupled rangefinder and other modern improvements.

There was little new in British sensitized materials although Ilford introduced a photoflood emulsion in their Ilford Colour film. There was still a shortage of roll film owing to the necessity of exporting large quantities of material, but the amateur had been helped by the importing of certain continental films, notably Ferrania from Italy and several French and Belgian makes. A limited amount of German sensitized material, particularly bromide paper, was imported and late in the year a new Belgian subtractive colour film, Gevacolor, was being sold in England in sheet film form for professional use. On the continent it was available additionally in 35-mm. and popular roll-film sizes but at the end of the year these were not yet obtainable in England. The Italian colour film Ferraniacolor, examples of which had been shown in Great Britain, was likewise not yet available. (*See* also CINEMA; TELEVISION; X-RAY AND RADIOLOGY.)

(P. W H.)

PHUMIPHON ADUNDET (BHUMIBOL ADULYADEJ), king of Thailand (b. Cambridge, Massachusetts, U.S., Dec. 5, 1927), younger son of Prince Mahidol of Songkhla (1892-1929). He succeeded to the throne on the death of his brother, King Ananda Mahidol, on June 9, 1946. The official explanation given of Phumiphon's departure two months later for Lausanne, Switzerland, was that the king was resuming his studies. At Lausanne he also composed dance tunes, both western and in Siamese style. In Sept. 1949 it was announced that the king and Princess Sirikit Kitiyakara (b. 1933), daughter of the Thai ambassador in London, had become engaged to be married. They returned to Bangkok at the end of March and the wedding took place on April 28. On May 5, during an impressive and traditional ceremony, he crowned himself " lord of the earth, unmatched in brilliance and power." The actual assumption of the crown by the king was witnessed by only the diplomatic corps, the senior members of the Chakkri dynasty and the members of the government.

PHYSICS. In 1950 research was vigorous and many-sided, and widely supported by public money though not, as a rule, tied to practical (or lethal) purposes. Nuclear (popularly called " atomic ") research struggled to learn more about the fundamental building bricks of matter (protons, neutrons and electrons), obtaining many new facts, but little clarification. Cosmic radiation was becoming better understood, but still presented riddles and surprises. Work at low temperatures showed quantum theory extending to the behaviour of liquid helium, which seemed to obey the laws of classical physics only down to $2 \cdot 2^{\circ}$ above the absolute zero ($-273 \cdot 1^{\circ}$C).

Fundamental Particles. The positively charged proton (nucleus of the ordinary hydrogen atom) and the negatively

charged electron are still the only particles which are truly stable. Together with the neutron—unstable when free but stable in atomic nuclei—they are the bricks of which all ordinary matter is made. In addition there are unstable particles of intermediary mass, called mesons, of which there exist at least five, and perhaps seven or more, kinds. The π-mesons (about 270 times as heavy as electrons) show most of the properties which H. Yukawa (Nobel prize winner, 1949) anticipated when in 1935 he predicted the existence of such particles on what at the time seemed a very tenuous argument but by 1950 was widely accepted. Positively and negatively charged π-mesons are found, as well as neutral ones. They were referred to as " nuclear glue " because their existence is closely tied to those, as yet imperfectly understood, " nuclear forces " which keep neutrons and protons together in nuclei. They are readily generated from nuclei if the required energy is made available, and they get readily absorbed by nuclei. In empty space charged π-mesons exist only about 10^{-8} seconds and then transform themselves spontaneously into the corresponding kind of μ-meson, thereby losing about one-quarter of their weight. The μ-mesons form a large part of the cosmic radiation observed at sea level, and their great penetrating power shows that, in contrast to the π-mesons, they can pass freely through atomic nuclei; also they are less unstable and live an average of 2×10^{-6} seconds before transforming themselves into (positive or negative) electrons.

The neutral π-meson (sometimes called *neutretto*) leaves no track in a cloud chamber or photographic emulsion and lives not more than 10^{-14} seconds; yet it is possible to determine the speed and direction of its brief flight. That is so because at the end of its short life it becomes converted into two quanta of gamma radiation which fly apart and can be recorded with comparative ease. Even its weight was measured: it was found to be about 4% lighter than the charged π-meson. More evidence was accumulated for the existence of τ-mesons, estimated to be 900 times as heavy as electrons. However they seemed to be very rare and little was known about them.

Particle Accelerators. Much of the work just mentioned became possible only through the development of machines (cyclotrons, synchrotrons, etc.) for the acceleration of protons or electrons to energies measured in hundreds of millions of electron volts; π-mesons originate when nuclei are struck by such fast particles. The 184-in. cyclotron (the figure indicates the diameter of the pole faces of the magnet employed) at Berkeley, California, which first produced mesons in 1947, no longer held the monopoly in 1950, though the U.S. still did. These machines were also used to study the deflections suffered by nucleons (*i.e.*, protons or neutrons) on colliding with other nucleons; such experiments formed the most direct attack on the problem of nuclear forces. Even larger machines (with names like bevatron, cosmotron, etc.), to give protons energies of over 1,000 million electron volts were being built, one in England and several in the U.S.

Cosmic Radiation. The origin of cosmic radiation was still a matter for speculation, but its nature became much clearer. The various penetrating radiations (mesons, gamma rays, electrons, etc.) which enter the laboratory are largely secondary, produced in the top layers of the atmosphere. To explore the primary rays recording equipment had to be sent up to altitudes of 100,000 ft. or more. Stacks of special photographic plates, suspended from balloons, brought back the surprising information that the primary radiation contained, in addition to the expected protons, a great variety of other atomic nuclei moving at extremely high speed. The proportion of the different kinds of nuclei appeared to be about the same as in stellar matter, but it was still uncertain by what kind of process stellar matter could be accelerated to speeds approaching that of light to within a small fraction of one per cent. The very large electric potentials required (of a million million volts or more) might originate, as in a dynamo, from the rapid motion of magnetized gases in stellar atmospheres, motions of which the sunspots give a comparatively feeble demonstration. Perhaps they occur in those mysterious radio stars (*see* ASTRONOMY) whose intense long-wave radiation appears to bear witness to violent electric disturbances in large bodies of very tenuous gas. Properties of such bodies are so wholly different from those of everyday matter that common sense, even in its trained form called physical intuition, is a very uncertain guide; its place has to be taken by calculation, inspired by the highest imaginative powers.

Nuclear Shell Model. It had long been known that the electrons in an atom are, crudely speaking, arranged in concentric shells; each completed shell marks the end of a period in the system of chemical elements. This shell structure results from the fact that the motion of each electron is governed overwhelmingly by the atomic necleus and only slightly disturbed by the presence of the other electrons. Inside the nucleus, no such dominating centre exists, and organization there was thought to be far less perfect; indeed the motion of the nucleons in the nucleus was likened to the jostling of molecules in a drop of liquid. For several years, more and more facts had pointed to a more orderly structure of atomic nuclei. In particular, certain numbers of protons or neutrons seemed to possess almost magic significance: nuclei containing 2, 8, 14, 20, 28, 50, 82 or 126 nucleons of one kind are more abundant than their neighbours and have other distinctive properties as well.

An interpretation of these numbers was offered, which necessitated two assumptions about nuclear forces. One was that a nucleon in a nucleus was not violently jostled by its neighbours but moved comparatively freely until it reached the boundary of the nucleus, when the joint attraction of its fellows pulled it back. Each nucleon thus moved in the kind of smooth and symmetrical force field which led to an orderly shell structure. The other assumption, necessary to explain the actual values of the " magic numbers, " was that the direction of the intrinsic spin of each nucleon was affected, much more strongly than had been previously thought, by the position of the orbit described by the nucleon. These two assumptions were important clues to the riddle of nuclear forces and an important guide to further research.

Detection of Nuclear Particles. The early study of radioactivity was undertaken chiefly from two of its effects: the blackening of a photographic plate; and the discharge of an electroscope. Then the study of individual nuclear events became possible through the discovery of the faint light flashes (scintillations) caused in zinc sulphide by the impact of single nuclear fragments. Watching scintillations was tiring and unreliable, and in the early 1930s it was superseded by purely electrical, automatic methods; thermionic valves were used to amplify the tiny pulses of current caused by the passage of nuclear particles through a gas in an electric field, and the amplified pulses were recorded electrically. Thus the development of radio swept the scintillation method into a dusty corner of scientific history.

Twenty years later, the development of television brought the scintillation method back with a flourish of trumpets. Television stimulated the development of photomultipliers which surpassed the human eye in sensitivity; they were reliable, indefatigable, fast and capable not merely of recording a light flash but also of measuring its brightness. Zinc sulphide was supplemented with a whole host of new phosphors, each with some distinctive feature. Some were inorganic crystals, others organic compounds like naphthalene or anthracene; even scintillating liquids were prepared.

During 1950 it became clear that the scintillation method opened new avenues to nuclear research, and indeed the full power of this new tool was probably not yet realized.

Superfluid Helium. Below 2·2°A, liquid helium takes on very extraordinary properties (extremely low viscosity and high heat conduction, among others) which have earned it the name " the quantum liquid. " In some ways it fits a prediction made by Albert Einstein in 1925 concerning the behaviour of certain gases at very low temperatures. These so-called Einstein-Bose gases are characterized by molecules consisting of an even number of electrons and nucleons, as ordinary helium indeed does, since it has two electrons and atomic weight 4 and so its nucleus contains four nucleons.

It was therefore very important to study the helium isotope of atomic weight 3; since it is not an Einstein-Bose gas but a Fermi-Dirac gas, the theory predicted for it a different and less striking behaviour. Unfortunately helium 3 is extremely rare and hard to extract from natural helium. Indeed the first specimen large and pure enough to be of real use was made artificially by the transformation of lithium exposed to neutrons from an atomic pile.

Experiments showed that helium 3 does not become superfluid down to the lowest temperatures tested. The comparatively small mass difference by itself is unlikely to be the reason, and thus the interpretation based on Einstein's prediction gained support. It must be said, however, that a different interpretation proposed by L. Landau also gained support; it was derived from experiments on the propagation of " second sound, " a phenomenon characteristic for superfluid helium. So the question was still open.

Optical Precision Method. If two nearly flat glass plates are pressed together, coloured fringes are seen in the reflected light. Such interference fringes had long been used to test the flatness of optical surfaces, and irregularities about 100 atomic diameters high could be easily detected. Work by S. Tolanski *et al.* greatly increased the sensitivity. By silvering the surfaces and by employing monochromatic light, the fringes were sharpened into very fine lines which could reveal surface steps only two atomic diameters high. The roughness of even the best optical glass in contrast to the smoothness of a cleaved crystal surface, was clearly shown.

On the other hand, crystal surfaces show sharply defined steps corresponding to one or more molecular layers. This is important for the problems of crystal growth. A perfectly smooth crystal surface offers no place where new molecules can easily attach themselves, even if the surrounding medium contains the required molecules, as vapour, melt, or in solution. Accidental steps on the surface offer places of attachment, but each new row of molecules would shift the step forward, and after one whole layer was deposited the step would have disappeared; no plausible mechanism for the rapid origination of new steps had been proposed.

It was suggested that crystal growth may largely depend on steps which end somewhere on the crystal surface. A model may be constructed by making a cut in a piece of paper and inserting a piece of cardboard in the cut; the paper will now have a step of constant height, extending from the edge to where the cut ends. Such a step cannot be obliterated by attachment of further molecules; it is " anchored " to the point where it ends and will sweep round and round that point as the crystal grows. The molecules laid down form, strictly speaking, not a succession of layers but one layer in the form of a flat spiral staircase; however, the deviation from the normal array of plane layers is noticeable only near the spiral axis and is called a spiral dislocation. Steps ending on a crystal surface were indeed found by the optical method described, and the theory of crystal growth through spiral dislocations thus gained support. There are various other kinds of dislocations which are important when crystalline materials are deformed. The optical interference method, as well as others, was being increasingly used to give better understanding of the yielding and failure of materials used in engineering. (*See* also ASTRONOMY; ATOMIC ENERGY; ELECTRONICS; RADIO, SCIENTIFIC DEVELOPMENTS IN.)

(O. R. F.)

PHYSIOLOGY. Amongst the most interesting physiological investigations of 1950 was a series of experiments with radio-active substances. White blood corpuscles, tagged with radio-active phosphorus, were obtained from a rabbit on distension of its peritoneal cavity with saline about seven days after it had had an intravenous injection of inorganic radio-active phosphate. This peritoneal exudate was centrifuged; and the cells, 90% of which were actively phagocytic neutrophils, were re-suspended in Tyrode solution. Ten to 15 millilitres containing about 50,000 cells a cubic millimetre were injected either intra-arterially or intravenously into the donor rabbit. The fate of the transfused cells was studied in determining the radio-activity of the various tissues after the injection of the labelled cells. In the blood, in spite of the injection of a concentrated suspension of white cells, an immediate decrease in the number of circulating white blood corpuscles was consistently noted. An increase in the number of white blood corpuscles occurred about six hours later. In animals killed 30 minutes after the injection, the greatest radio-activity was found in the lungs, no matter which route was used for the injection; in animals killed four hours after the injection, the liver contained the greatest amount of radio-activity, but the lungs and spleen had the highest percentage per gramme of tissue. The histological appearance of the lungs showed a marked engorgement of the intra-alveolar septa with white blood corpuscles.

Heat-Production of Tropical People. From Ceylon and Brazil came reports which indicated that in the tropics human heat-production under basal conditions is related more closely to the body weight (*i.e.*, more accurately, to the " metabolically active weight ") than to the body surface-area, to which it is related in the temperate zones. Moreover the " metabolically active weight " is greatest in fat men and least in lean.

Uric Acid Metabolism. The size of the " miscible pool " of uric acid in normal men and in gouty subjects was measured by determining the dilution of uric acid labelled with stable isotopic nitrogen after intravenous injection. In the normal male the " miscible pool " of uric acid is about 1 gramme; in gouty patients it may reach 30 or more grammes. When a patient with gout was treated with uricosuric doses of acetyl salicylic acid or with adrenocorticotrophic hormone the uric acid pool decreased towards the normal value probably by virtue of an increased renal clearance of uric acid. An examination of the simultaneous renal clearances of inulin and urate showed that in man urate is excreted by glomerular filtration and active tubular re-absorption. The magnitude of the latter is such that it is probably never saturated under normal conditions and hence cannot be considered as directly involved in the regulation of the plasma urate concentration or urate excretion.

Placental Function. The α-amino acid nitrogen content was determined and the distribution of the individual amino acids chromatographically analysed in foetal and maternal plasma obtained at delivery before separation of the placenta. In all of nine pairs a higher concentration of α-amino acid nitrogen was found in the foetal plasma as compared with the maternal plasma. All the amino acids were involved in the increase. It was suggested that the placenta acts as an amino-acid pump to enable the foetus to synthesize protein. A relatively low foetal/maternal ratio for plasma amino acids was observed in four cases where the mother had a toxaemia of pregnancy.

Intestinal Absorption. A new experimental approach to the problem of absorption in the small intestine was offered by the so called "surviving rat small intestine" preparation. The utility of this preparation was shown in a study of active glucose absorption: glucose is transferred from the lumenal to the serosal side against a concentration gradient. Phlorrhizin inhibits this activity. The results obtained lend support to the idea of the intestine's having a linear gradient of ability to absorb glucose from the lumen. The gradient has two components, a linear gradient of utilization of glucose by the intestinal wall and a linear gradient of translocation of glucose across the mucosa. The latter gradient is much steeper than the former, which, it was suggested, is constant per unit of mucosal area.

Body Water and Body Fat. Total body water can be determined by measuring the dilution of deuterium or tritium oxide in the living body, but such procedures are difficult and costly. Latterly it was shown that antipyrine is uniformly distributed throughout the body water. The volume of dilution of antipyrine was used to measure the body water in two large groups of individuals. In a group of 81 male naval personnel studied by H. R. Behnke *et al.* the body water ranged from 43%—72% of body weight, whilst B. B. Brodie *et al.* obtained 40%—68% in 51 males and 30%—53% in 31 females; the differences were attributed to their body fat. Using body specific gravity as determined by under-water weighing, Behnke *et al.* determined the percentage of water in the lean body mass as 71·8 with a standard deviation of ±2·99 and considered this to be a physiological constant for normal men: if this constant is used the total body fat can be determined from the water content. The results so obtained showed considerable agreement with those obtained by using body specific gravity measurements and an equation derived experimentally from animals.

Gastric Motility. In the fasting dog under chloralose-urethane anaesthesia, stimulation of the cerebrum in the "insular-orbital" area or in the cingulate gyrus inhibited the motility of the pyloric antrum. Inhibition was also produced by stimulation of the central end of the cut vagus, splanchnic, femoral or sciatic nerves even after mid-brain decerebration. It was considered that impulses originated by cortical or reflex stimulation were transmitted to vagal motor centres in the lower brain stem for pyloric antral motility; and therefore that inhibition or more rarely augmentation of the rhythmic activity of these centres was transmitted solely over the vagus nerves to the stomach.

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PICKLES, WILFRED, British actor, comedian and radio entertainer (b. Halifax, Yorkshire, Oct. 3, 1904), was educated at Parkinson Lane school, Halifax. He was interested in the theatre from an early age and acted for a number of amateur dramatic societies in Halifax. His first broadcast was in "Children's Hour" from Leeds in 1927. Ten years later he became a regular broadcaster, as an actor in feature programmes and plays, and a singer and compère. He first became widely popular as "Billy Welcome" in the series "A Journey from Appleby to Richmond" which began in July 1941. In 1941-42 he was a news reader, at first from the North region and then from London. After a spell of stage work he returned to radio as "quiz-master" of the North regional series "Have a Go Joe" in March 1946; with the title modified to "Have a Go" the series became nationally popular. This simple competition for money prizes was broadcast from various parts of the British Isles, with local people as the "victims"; it provided the framework for a spontaneous social gathering and the introduction of interesting personalities. Pickles earned immense popularity by his ability to put the most timorous broadcasters at their ease. In the 1950 Birthday Honours he was made an O.B.E. As a straight actor, Pickles was heard as Trimalchio in Petronius Arbiter's "Trimalchio's Feast" on the Third programme in Dec. 1948; and as Denry Machin in Arnold Bennett's "The Card," Oct. 1949. He introduced "The Pleasure's Mine," a series of verse readings, in Nov 1949 and first appeared in television in March 1950, as William Mossop in Harold Brighouse's "Hobson's Choice."

PIGS: *see* LIVESTOCK.

PIUS XII, the 262nd successor of St. Peter in the see of Rome (b. Rome, March 2, 1876, as Eugenio Pacelli), was elected by the cardinals in conclave on March 2, 1939, and was crowned pope ten days later. (For his early life see *Encyclopædia Britannica.*)

In 1950 Pope Pius welcomed an estimated 3 million visitors who went to Rome to do penance and gain the special indulgences extended to pilgrims during the Holy Year. Addressing several thousand French teachers and students of both Catholic and public schools the pope said that not faith but those who deny or discard God should be considered the real enemies of learning and science; he explained that between the concrete results of scientific investigations and the essential gifts of faith there was not



Pope Pius XII with relatives of Maria Goretti whom he canonized on June 25, 1950. In the wheel chair is the mother of the new saint.

and could not be any irrevocable opposition. In a letter to the prefect of the Sacred Congregation for the Propagation of the Faith, on the occasion of the International Missionary congress, the pope said that the church had no desire to rule over peoples or to vest itself with power in merely temporal matters; its anxiety was to bring the heavenly light of faith to all nations and to promote human civilization and fraternal concord among peoples. *Summi Maeroris*, an encyclical published in July, urged bishops throughout the world to pray for peace among the nations. This encyclical was a reply to the so-called Stockholm peace appeal. Pope Pius warned theologians against a too conciliatory doctrinal attitude toward non-Catholics in his encyclical *Humani Generis*. Making the first solemn dogmatic definition uttered by the pope alone since the definition of the doctrine of the Immaculate Conception in 1854, Pope Pius XII proclaimed, on Nov. 1, the dogma of the corporal assumption of the Blessed Virgin Mary to heaven. (*See* also HOLY YEAR; ROMAN CATHOLIC CHURCH; VATICAN CITY STATE.)

(J. LaF.)

PLAGUE. The World Health organization proposed, in its meeting of Dec. 1949, to implement active measures against plague. It was decided that a more definite knowledge of the extent of dissemination and the delimitation of endemic areas was of fundamental importance. More specifically, it was agreed that the relationship of wild rodent plague to that of domestic rodents was to be studied, and Africa was selected as the site for these observations. Demonstrations of control methods by the use of rodenticides, pulicides and practically applicable rat-proofing were to be carried out in Bombay state, India, and possibly in Madagascar. A recommendation was made for a study of the disinfestation of rice by fumigation with liquid hydrocyanic gas, as was the practice at Colombo, Ceylon, but because of the danger inherent in the use of the liquid gas, alternative methods were selected which included the application of cyanogas (calcium cyanide) by pouring the powdered chemical over the rice while in bin storage, also the use of methyl bromide and acrylon. Treatment of pneumonic plague by the administration of streptomycin was set for trial in South Africa and China. Prophylaxis was to be investigated by the administration of sulphadiazine or sulphamerazine to the contacts of cases. Studies were to be made toward establishing a world-wide nomenclature of animal reservoirs and plague vectors.

The significance of these proposals for organized investigations under a central agency was attested by the world-wide incidence of plague, the suggested variations in its epidemiology in different areas and in the diversities among reports concerning its control and the treatment of cases. Between Jan. and June 1950 human cases were reported to have occurred in: Africa 83 cases, of which 45 were in Madagascar; Asia, Burma 342 cases, China 943 (Fukien province 696), India 36,529, Indo-China 492, Java 339, Thailand 56, and a scattered few in other eastern countries; South America, Ecuador 14, Peru 16, Venezuela 5; North America, the U.S. 3.

An analysis of ten years' observations and experiments in Kenya, Africa, indicated a seasonal epidemicity and disclosed factors which were at variance, apparently, with those operative in other parts of the world. *Xenopsyllus cheopis* and *brasiliensis*, *Dinopsyllus lypusus* and *Ctenophthalmus cabirne* are the four common fleas in the area, and all transmit plague under experimental conditions. *Rattus* and *Mastomys coucha* are the common rats, and the latter species is probably the predominant animal reservoir of the endemic. *X. brasiliensis* is regarded as the most important vector to both rats and man. The plague outbreaks and seasons are accompanied by a marked increase in the number of *Rattus*. As many of these were trapped during one week of an outbreak as in four months of a quiescent period. The absence of *Rattus* is a main factor in the absence of the disease. The flea index of both *Rattus* and *M. coucha* was much higher during the quiescent period than during the outbreak. It is not a high flea index but a prevalence of *Rattus* that is responsible for the initiation and continuance of an outbreak; and the number of fleas on a rat has no correlation with its sickness or health. It was suggested that *X. brasiliensis* is stronger, numerically, during the initial plague period, and declines with the subsidence of the epidemic. During the subsidence the ratio of males to females increased, and in the quiescent periods males predominated, numerically.

The development and use of new chemicals as rodenticides continued during the year. A report of the use of sodium fluoracetate during four years in the deratization of ships indicates that poisoning by this chemical was gaining precedence over fumigation. It was distributed as a 1 to 256 aqueous solution tinted with nigrosine, in crateriform paper cups of ¾ fl.oz. The number of cups placed on a ship depended upon its size, structure, cargo and degree of rat-proofing, but averaged 60 to 70. The period of exposure averaged about 18 hours, after which the rats and cups were collected, and the latter promptly destroyed by burning. The efficiency of the procedure was regarded as a kill of 91·8% of the rats estimated to have been on the ship. As an additional precaution the cups of poison were placed in and surrounded by an ample area heavily dusted with dichloro-diphenyl-trichlorethane (DDT) for the purpose of killing fleas which left the rats. Many of the latter died within short distances of the cups.

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(N. E. W.)

PLASTICS INDUSTRY. The raw material situation promised well at the beginning of 1950; the erection and working of the petroleum "cracking" plants (*see* PLASTICS INDUSTRY, *Britannica Book of the Year*, *1950*) progressed rapidly, as did the factories for manufacturing polystyrene and increasing production of phenolic and urea resins, polythene and polyvinyl chloride. The *Report on the Chemical Industry*, requested by the president of the Board of Trade and compiled by the Association of British Chemical Manufacturers early in 1950, included a plastics section showing the proposed expansion (there were 89 schemes in all) which would increase existing production by some 80%. The published figures included the potential improvement in trade that should result:

	Annual Tonnage	Value
Existing productive capacity . .	185,738	£37,741,000
Capacity on completion of schemes .	339,189	£71,881,000
Decrease in imports	—	£3,266,000
Increase in exports	—	£7,022,000

Extra employees required: 4,500.

The first bulk consignment of polystyrene made from raw materials produced in the new petroleum cracking plants was despatched from the Partington factory of Petrochemicals to Erinoid. The importance of this resin was indicated by the erection of yet another factory for the production of the monomer by Forth Chemicals at Grangemouth. Both Monsanto Chemicals and British Petroleum Chemicals were associated in this endeavour—the polymer was being made at the Newport works of Monsanto Chemicals.

First details of polymethyl alpha-chloracrylate resin were announced by Imperial Chemical Industries. Although still in the development stage, its properties showed considerable improvement over polymethylmethacrylate which is employed throughout the world, more especially as transparent or

opaque sheet but also as moulding powder. The chloracrylate was stronger, tougher and harder, possessed a softening point some 30° C. higher and for many practical purposes could be classed as non-inflammable. The raw material for its production was trichlorethylene.

As in the U.S., rearmament affected both prices and supplies. It was announced, for example, that Great Britain had arranged to export many millions of gallons of benzol to the U.S.

The British Industries fair demonstrated the great strides made by the plastics machinery designers and builders to keep pace with the growing industry. Bradley and Turton and T. H. and J. Daniels both exhibited their new automatic cycle control units. B. I. P. Engineering showed a new compression moulding press of high merit, and Finney a new 50-ton dual transfer moulding press. Safety devices on presses were now universal.

Quality of finished units improved greatly. This referred not so much to moulding technique, which had long been high, as to more appropriate choice of materials for specific jobs. This had been aided by the more ready supply of polystyrene, cellulose aceto butyrate, nylon and so on. Large injection mouldings (*e.g.*, for radio cabinets) were of better dimensional stability when made of aceto-butyrate, and nylon was used on certain small motor parts for improved toughness. While normally available polystyrene was not sufficiently heat resistant to be used for cups, polymethylmethacrylate was much more suitable. Melamine cups, saucers and plates with even higher heat resistance and harder surfaces were now being produced. Polystyrene on the other hand was excellent for wine and cocktail glasses.

A development of exceptional importance in the widening use of plastics was the laying down of 9,000 yd. of polythene tubing for the supply of water to the first large scheme of development of small holdings created under the Agricultural act, 1947. This was carried out at Hoon-Hatton estate, Derbyshire, and was an excellent example of the advantageous replacement of metals. Polythene was unaffected by corrosive soils and water and was resistant to frosts so that no bursts could occur where the pipe was exposed above ground.

United States. Progress in the manufacture of plastics in the U.S., the largest producing country in the world, continued during 1950. The 1949 production figures issued by the U.S. Tariff commission showed that manufacture reached a total of some 450,000 tons, a figure which excluded those synthetic resins which were employed for paints and varnishes. In view of new applications, new processes and new machines, this figure was surpassed during 1950 although final figures were not available by the end of the year. Most significant was the increased ascendancy in quantity of thermoplastics over thermo-setting resins.

Two examples among many explain how increased production was obtained. The first was the introduction on a large scale of the polythene bottle which succeeded in entering large markets by virtue of its chemical and physical properties. First considered only as a chemical bottle because of its resistance to acids, its lightness, " squeezable " nature and complete resistance to breakage made it exceptionally important to the pharmaceutical and cosmetic industries in spite of its higher price. Many millions had been produced as part of powder and liquid spraying devices and in fields in which the glass bottle was useless.

Of still greater importance in many ways was the research work in moulding larger objects from thermoplastic materials. Whereas only two years before the industry reported the phenomenal production of 20 oz, 40 oz. and, in one instance, of 60 oz. mouldings, 1950 saw the installation in the works of A. L. Hyde, Grenlock, New Jersey, of a 200 oz. injection moulding machine manufactured by the Watson Stillman company, Roselle, New Jersey. Complete refrigerator casings were produced on this machine from polystyrene. In effect, this movement opened up the possibilities of entry into new fields that were the prerogative of metals, many of which were scarce, more expensive when calculated on a cost/volume basis and also less suitable in respect of certain physical properties.

Overshadowing such promising industrial developments was the international situation—the war in Korea and rearmament which had created exceptional shortages and had increased prices. Typical was the decision to re-open those synthetic rubber factories which had ceased operations after World War II. Specifically, the important synthetic rubber known as GR-S was made from a mixture of monomers, of which styrene monomer was 25% by weight and since such increased production was of the order of hundreds of thousands of tons, this manufacture seriously affected the production and price of polystyrene moulding powders for the plastics industry. Furthermore, the resulting shortage of polystyrene caused a great increase in demand for benzol from which styrene is made and a 25% to 40% increase in its price. This affected the production of synthetic phenol which was employed for making phenolic resins and thus, too, the supply of phenolic and cresylic resins and of plasticizers of the widely used cresyl-phosphate type. Also, rearmament required vast quantities of all finished plastic units, both of thermosetting or thermoplastic types. The provision for the services of rigid equipment from phenolics and urea resins, glues from the same types and electric-wire and cable covers, ground sheets, radar equipment, clothing, films for waterproof packaging of medicines or spare parts, and unbreakable bottles from polyvinyl compounds, etc., began to restrict allocations of plastics for ordinary public and industrial applications. (*See* also MUNITIONS OF WAR; PAINTS AND VARNISHES; RAYON AND SYNTHETIC FIBRES; RUBBER.) (M. D. CN.)

PLASTIRAS, NIKOLAOS, Greek army officer and statesman (b. Karditsa, Thessaly, 1883), was of peasant stock. An enthusiastic Venizelist, he fought in the Balkan Wars, in World War I with the Allies at the Salonika front and from 1920 in Anatolia. After the Turkish victory, Plastiras, by now a colonel, formed a revolutionary committee on the island of Chios (Sept. 26, 1922). He forced King Constantine to abdicate in favour of his son George and indicted the Populist leaders on the ground of responsibility for the Greek disaster in Turkey. Five ministers and one general were sentenced to death and shot (Nov. 28, 1922). A year later Plastiras banned King George II (Dec. 18, 1923) and himself resigned in Jan. 1924; by then he was a lieutenant general. Being barred from Athens in 1925 by another dictator, General Theodoros Pangalos, he went to France, whither he returned after the failure of another attempted *coup d'état* (March 6, 1933). In 1935 he was implicated in the Venizelos rebellion (March 1) and sentenced to death in his absence. After the defeat of the Communist rebellion in Dec. 1944, Plastiras was considered by Winston Churchill as a man fitted to achieve national conciliation. Brought back to Athens and made prime minister, he remained in power four months (Jan. 2-April 8, 1945). After the elections of March 5, 1950, he returned to power for a further four months as head of a centre coalition cabinet (April 15-Aug. 18). He visited Paris in June where he presided over the committee of ministers of the Council of Europe.

PLEVEN, RENÉ, French statesman (b. Rennes, April 13, 1901), son of an army officer. After graduating in law at the University of Paris, he chose a business career and

at the outbreak of World War II was managing director of an industrial company in Great Britain. He went to the U.S. as deputy chairman of the French Air mission but was back in France at the time of the capitulation. He joined General Charles de Gaulle in London and was sent to assist in rallying French Equatorial Africa to the Free French cause. After his return to London, he became commissioner for economy, finance and the colonies in the French National committee, in Sept. 1941. He was minister of colonies in the French provisional government at Algiers (June 1943) and minister of finance in de Gaulle's first government formed in Paris (Nov. 1944); subsequently he added the portfolio of national economy to that of finance, retaining both until Jan. 1946. Pleven was a member of the first Constituent Assembly (Oct. 1945-May 1946) and of the National Assembly elected on Nov. 10, 1946. He held no further ministerial office until Oct. 1949 when he became minister of national defence in the Bidault government. After its defeat on June 24, 1950, he declined the president's invitation to form a new government and remained minister of defence in the Queuille government (June 30-July 4). On July 11 Pleven was confirmed as prime minister by the National Assembly by 373 votes to 185 and the following day formed a coalition cabinet of Christian Democrats (M.R.P.), Radicals, Socialist and a few smaller groups. For having formed a "third force" government he was fiercely attacked by the Gaullist supporters.

PNEUMONIA. The problems of the differential diagnosis of lobar pneumonia continued to exercise the medical profession in 1950. It had long been recognized that many other diseases may start with an acute febrile attack and signs of lobar consolidation, the two most serious being pulmonary tuberculosis and new growth of the lung. In the case of pulmonary tuberculosis, the lobar consolidation may be tuberculosis from the start. Radiology and sputum examination may reveal the diagnosis, which may also have been suggested by the failure of penicillin or sulphonamide treatment. In some patients, however, a lobar pneumonia may have lowered the resistance so that they later show signs of a tuberculous infection of the lung. In the case of a new growth of the lung the fever at the onset is usually caused by a streptococcal infection and is rapidly controlled by penicillin and the sulphonamides. By careful attention to small details, such as repeated spitting of blood or persistence of the lobar consolidation, the underlying cause can be discovered.

Apart from these problems of differential diagnosis interest was still focused on the virus pneumonia. There was as yet no unanimity of opinion about the use of the term "atypical pneumonia." Many physicians considered this to be another term for virus pneumonia; some distinguished between the terms. Most writers appeared to base the diagnosis of virus pneumonia on the failure of response to sulphonamide and penicillin treatment. Others laid down certain diagnostic criteria, of which the presence of "cold" agglutination in the blood is one. Apart from the reported epidemics of atypical pneumonia it is probable that a great many different conditions were included under this title, not all of them pneumonia.

Alvin S. Hartz in an analysis of 500 cases of pulmonary tuberculosis, found that 71 of these cases had suffered from lobar pneumonia. Hartz gave details of 13 cases in which the pneumonia was considered to be probably tuberculosis, when reviewed at a later date. This conclusion is open to severe criticism. Tuberculosis lobar pneumonia was always considered to be a very serious disease with a high mortality. In all 13 cases quoted the fever responded to sulphonamide therapy and the patients made uneventful recoveries, only to be found to have pulmonary tuberculosis at a later date (*see* "The Diagnosis of Pneumonia preceding Tuberculosis," *Ann. Int. Med.*, p. 1066, Philadelphia, 1950).

Morris Block stated that "parenterally administered penicillin remains the method of choice in the treatment of pneumococcus pneumonia" and that in other rarer pneumonias "the value of aerosol penicillin over parenterally administered penicillin is unproved." These were personal opinions, and in the article quoted were not supported by facts and figures. However, these views were held by the majority of physicians (*see* "Inhalation and Aerosol Therapy in Pneumonia, Pulmonary Edema and Bronchiectasis," *Bulletin N.Y. Acad. Med.*, New York, June, 1950).

(F. P. L. L.)

POLAND. People's republic of eastern Europe bounded E. by the U.S.S.R., S. by Czechoslovakia, W. by Germany and N. by the Baltic sea. Area: (before Sept. 1, 1939) 150,052 sq.mi.; (after Aug. 2, 1945) 120,359 sq.mi.—a reduction by one-fifth, the result of the annexation of 68,667 sq.mi. by the U.S.S.R., and of the establishment of a new western frontier along the rivers Oder and Neisse which, together with the partition of East Prussia between Poland and the U.S.S.R., gave Poland an area of 38,974 sq.mi. Pop.: (before Sept. 1, 1939) 35,339,000; (Feb. 14, 1946, census) 23,929,757; (Dec. 3, 1950, census, prelim. fig.) 24,976,926. Language: Polish. Religion: Roman Catholic. Chief towns (pop., first figure Sept. 1, 1939, est.; second figure latest est.): Warsaw (cap., 1,289,000; Nov. 1, 1950, 673,959); Łódź (672,000; July 1, 1949, 615,000); Cracow (259,000; Dec. 1, 1949, 347,517); Poznań (272,000; July 20, 1950, 341,678); Wrocław (625,000; Sept. 1, 1948, 299,000); Szczecin (272,000; Dec. 1, 1949, 201,000); Gdańsk (235,000; Sept. 1, 1948, 164,000); Katowice (134,000; Sept. 1, 1948, 163,000). President of the republic, Bolesław Bierut; prime minister, Józef Cyrankiewicz.

History. Soviet control over Poland's home affairs, armed forces, economy and cultural life was further tightened during 1950: the nation's imposed isolation from the west seemed complete, social intercourse between Poles and the western diplomatic corps was reduced to a minimum and by the end of the year no representative of the British press remained in the country. The only western correspondent left in Warsaw was Edward A. Morrow of the *New York Times*. Contact abroad was made difficult for the people by the compulsion to hand in letters personally at post offices when note was taken of the sender's name and address. Correspondence mailed in post boxes was destroyed. Out of some 400,000 Poles in France, 162,000 in Great Britain and well over 100,000 in Western Germany none returned to Poland during the year; but about 400 escaped monthly from Poland to Western Germany and Austria.

Home Affairs. At a meeting of the central committee of the Polish United Workers' (Communist) party, held in Warsaw on May 8-10, the chairman, B. Bierut, forecast a depression in the U.S. and increasing divergencies between the foreign policies of the U.S. and Great Britain. He insisted that at home the party should be more vigilant in unmasking class enemies, foreign spies and saboteurs. The election of Marshal Konstanty Rokossowski (*q.v.*) and Zenon Nowak to the Politburo of the party increased the membership to 13; to the three secretaries general (Aleksander Zawadzki, Roman Zambrowski and Cyrankiewicz) were added the names of Franciszek Mazur, Edward Ochab and Nowak as secretaries. Nowak, who was charged with purging the party of "nationalist deviationists," on July 17 informed the central committee that deviation was discernible not only among the younger generation and among women, but also among the senior activists of the party. Hilary Minc, deputy prime minister and member of the Politburo, on the same day

declared that the majority of the Poles who had returned home from the west since 1945 were foreign agents and spies; he also admitted that a remnant of the wartime underground was still active. The party membership was estimated in April 1950 at 1,360,000, including 51·9% workers, 4·9% agricultural workers, 14·8% peasants and 28·4% "intellectuals," that is, state employees. Among the few names of the purged which were announced, the best-known was that of Władysław Wolski, former minister of public administration, a friend of Władysław Gomółka. No trial of the latter took place until the end of the year but Ochab, who in Oct. 1949 accused Gomółka of "building a wall of mistrust between Poland and the Soviet Union," in November published in *Nowe Drogi* a fresh attack on the former deputy prime minister and secretary general of the Communist party. This time Gomółka was accused of being unable to learn that only through German unity could the Americans, British and French be deprived of the Western German industrial area.

The Communist grip on the government increased during the year. Cyrankiewicz, a former Socialist, remained formally prime minister, but the real power was in the hands of the three Communist deputy prime ministers, Minc, A. Zawadzki (appointed on May 3) and Hilary Chełchowski (appointed on June 14). The fourth deputy prime minister was Antoni Korzycki, leader of the United Peasant party. During the year this party was once more heavily purged (*see* PEASANT MOVEMENT). The fiction of a coalition government was maintained during the year: Jan Rabanowski, who in March was elected leader of the Democratic party, continued to serve as minister of transport; Tadeusz Michejda, from Oct. 1949 leader of a Christian Democratic group calling themselves the Party of Labour, was still minister of health. In July, however, the Party of Labour was absorbed into the Democratic party.

On March 20 the Sejm abolished the offices of provincial governor, of district administrator, of mayor and of chairman of the rural council, establishing instead popular councils on the Soviet model; these were responsible to the state council (*Rada Państwa*), a small body of picked Communists presided over by Bierut and similar to the presidium of the Supreme Soviet of the U.S.S.R. This reform put an end to such little self-government as remained and heralded the introduction of a new Soviet-inspired constitution which simplified the control of the country by the Politburo of the Communist party.

From June 1 the number of provinces (*województwa*) was increased to 17 by the creation of three new provinces in the western territories. In 1945 all Pomorze or maritime land east of the Oder had been divided between the two provinces of Szczecin and Gdańsk; now a new province of Koszalin was created between the two. The province of Poznań, which in 1945 had been extended westwards to the Oder-Neisse line and had become the largest in Poland, was divided in two, Poznań and Zielona Góra. Recovered Silesia, previously divided into two provinces, was redistributed to form three, a new province of Opole was created between the provinces of Wrocław and Katowice. On Oct. 1 a Soviet-inspired judicial system, described as aiming at the "democratization of justice," was introduced.

Armed Forces. Until Feb. 1950 the duration of compulsory military service was 18 months and recruits were conscripted at 21. On Feb. 4 the Sejm increased the general period of service to 2 years (but 3 years in the air force and the navy and 27 months in the home security formations) and the age of conscription was lowered from 21 to 20 years. By this procedure the Polish armed forces consisted from October of three age-groups and comprised about 510,000 men. Out of the existing 16 infantry divisions 4 were being motorized (or made lorry-borne) and 4 others mechanized (2 regiments of motorized infantry and 1 armoured regiment); additional armoured divisions were in course of formation. The high command of the armed forces were exclusively composed of high-ranking Soviet officers of Polish origin or with polonized names: they were ironically described in Warsaw as P.O.P. (*pełniący obowiązki Polaka* "taking a Pole's part"). Besides Marshal Rokossowski, minister of national defence and commander in chief, the most prominent were: General Władysław Korczyc, deputy minister of national defence and chief of staff; General Stanisław Popławski, deputy minister and commander of the land forces; General A. Romeyko, commander of the air force; Admiral N. Szelągowski, commander of the navy; and Generals J. Rotkiewicz, B. Połturzycki, W. Strażewski and B. Kieniewicz, commanding respectively the military districts of Warsaw, Bydgoszcz, Wrocław and Cracow. A new army oath introduced on July 22 required the Polish soldier to swear to defend peace "in line with the Soviet and other allied armies." In August Soviet military regulations were introduced in the armed forces and from Oct. 1 a new uniform vaguely similar to that of the Soviet army became compulsory: in particular the traditional square caps were replaced by round ones. The armed forces were equipped with standard Soviet armament.

The Struggle Against the Church. The trouble that had been fomenting between the Communist regime and the Roman Catholic Church for five years came to a head. Hostilities were opened by the government on Jan. 23 when, under the pretext of preventing misuse of goods and money, they seized control of Caritas, a charitable organization receiving funds and relief goods from public collections in Poland and abroad (mainly from the U.S.) and also subsidies from the state. The Polish hierarchy met in Cracow on Jan. 30 and on Feb. 12 a statement was read from the pulpits throughout the country. Four days later Cardinal Adam Sapieha, archbishop of Cracow, and Mgr. Stefan Wyszyński, archbishop of Gniezno and Warsaw and primate of Poland, addressed a letter to Bierut accusing the government of bad faith in dealing with religion and the church. The government replied on Feb. 27 by a communiqué accusing the hierarchy of hostility towards the people's Poland. The government, continued the communiqué, respected religious freedom and were convinced that with the active support of the masses of the faithful and of the enlightened clergy they would succeed in bringing about a settlement between the state and the church. On March 20 a law was passed by the Sejm by which all estates and farms exceeding 250 ac. owned by the church were to be seized together with all livestock and buildings.

On April 14, in the name of the hierarchy but without the sanction of the Holy See, an agreement was signed by Mgr. Zygmunt Choromański, bishop auxiliary of Warsaw, Mgr. Tadeusz Zakrzewski, bishop of Płock, and Mgr. Michał Klepacz, bishop of Łódź; for the government the document was signed by Wolski, minister of public administration, and by two members of the Politburo, Ochab and Mazur. The agreement included a guarantee by the state of religious tuition in the schools, of pastoral care in the armed forces, hospitals and prisons, of the continued activity of the Catholic university at Lublin and of publication of Catholic books and periodicals. It also recognized the Pope as the authoritative and supreme head of the church in matters of faith, morals and ecclesiastical jurisdiction; in other matters, however, the hierarchy was to be guided by the state. The bishops agreed to support efforts towards "the preservation of peace and to oppose tendencies working for the preparation of a new war"; they also stated that the recovered territories east of the Oder-Neisse line belonged perpetually to Poland

and undertook to ask the Holy See to recognize Polish sovereignty there by appointing diocesan bishops in place of the Apostolic administrators in Wrocław, Gdańsk, Gorzów, Opole and Olsztyn.

On the day of signature of the agreement Cardinal Sapieha arrived in Rome and on April 20 was received by the Pope, returning to Cracow on May 9 Two days earlier an Office for Religious Cults was established at the presidency of the council of ministers with a Communist, Antoni Bida, as director. Failing to carry out the April agreement, the government suppressed religious tuition in more than 1,000 schools and the police continued to harass the clergy. On Sept. 12, after a special episcopal assembly at Częstochowa, Cardinal Sapieha and Archbishop Wyszyński addressed a second letter to Bierut surveying the previous five years and protesting that despite assurances the government was waging an unrelenting struggle against religion and the church. The government replied by counter-charges. On Oct. 24 Bida sent a note to Mgr. Choromański, secretary to the hierarchy, accusing the church of an attitude antagonistic to Poland's national interests because it failed to recognize the new frontiers and appoint bishops in the recovered territories. The Communist regime was thus able to bring its campaign against religion on to ground where it had almost the whole nation behind it.

German-Polish Frontier. On June 5 a delegation of the Eastern German government led by Walter Ulbricht, deputy prime minister, arrived in Warsaw to discuss outstanding questions between the two countries. An agreement recognizing the Oder-Neisse line as the permanent frontier was initialled. It was signed on July 6 at Zgorzelec-Görlitz, a town on the river Neisse divided in two by the new frontier. Otto Grotewohl, the prime minister, and Georg Dertinger, the foreign minister, led the German delegation; Cyrankiewicz, the prime minister, and Stefan Wierbłowski, acting foreign minister, headed the Polish delegation. On Nov. 28 Dertinger and Jan Izydorczyk, chief of the Polish diplomatic mission in Berlin, exchanged the instruments of ratification of the treaty. On Dec. 18-20 Wilhelm Pieck, president of the Eastern German republic, paid an official visit to Warsaw. (*See* also EASTERN EUROPEAN ECONOMIC PLANNING; GERMANY.)

Education. Schools (1949-50): kindergarten 5,860, pupils 343,000; primary 22,417, pupils 3,242,000, teachers 76,560; secondary (1948-49), lower grade 335, pupils 197,110, higher (*liceum*) grade 486, pupils 140,893; secondary vocational 1,131, pupils 183,440; teachers' colleges 149, students 31,000; higher vocational institutions 39, students 16,988; universities (8), technical colleges (5) and other institutions of higher education (14), students 92,444.

Agriculture. Main crops (in '000 metric tons, 1949; 1950 est. in brackets): wheat 1,781 (1,990); rye 6,759 (5,880); barley 1,028; oats 2,333; sugar, raw value 825; potatoes 30,900. Livestock ('000 head, mid 1947; mid 1949 in brackets): cattle 4,746 (6,345); horses 2,016 (2,541); pigs 4,274 (5,818); sheep 983 (1,617); goats 678 (654). Fisheries: total catch (1949 est.) 69,600 metric tons.

Industry. Fuel and power: coal ('000 metric tons, 1949; 1950, six months, in brackets) 74,076 (38,263); electricity (million kwh., 1949; 1950, six months, in brackets) 8,148 (4,380); crude petroleum (1948 est.) 132,000 metric tons. Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): steel ingots and castings 2,304 (1,231); lead (1948) 18·5; zinc (1948) 120. Manufactured goods ('000 metric tons, 1948; 1949 in brackets): cotton yarn 81·9 (91·2); wool yarn 33·2 (38·5); rayon filament yarn 7·1 (9·0). Cement (1949) 2,340,000 metric tons.

Foreign Trade. Value (official estimates in million U.S. dollars, 1947; 1948, in brackets): import 320 (509); export 250 (528·7). Figures for 1949 were issued in roubles: import Rb. 2,530 million, export Rb. 2,476 million.

Transport and Communications. Railways (Jan. 1948): 21,415 km.; freight traffic (1949, monthly average) 2,724 million ton-km.; passenger traffic (1949, monthly average) 1,752 million pass.-km. Roads (April 1947): 96,605 km. Licensed motor vehicles (April 1948): cars 24,240, buses and lorries 28,957, motorcycles 24,561. Shipping (May 1949): merchant vessels 46, total tonnage 164,989 B.R.T. Freight traffic in Polish ports (monthly averages, '000 metric tons, 1949): unloaded 238, loaded 1,171. Air transport (1948): Polish airlines, flights 7,730, km. flown 2·4 million, passengers flown 77,522; foreign airlines, flights 1,221, passengers flown 6,960. Telephones (Jan. 1948): subscribers 137,400. Wireless licences (July 1949): 1,054,551 including 335,489 home loudspeakers.

Finance and Banking. Budget (in million pre-revaluation złoty): (1949 est.) balanced at 612,058; (1950 est.) balanced at 1,265,800. Currency circulation (Dec. 1948, last figure published): Zł. 128,800 million. A drastic currency revaluation was introduced on Oct. 28 to bring the złoty at par with the Soviet rouble. Banknotes were exchanged at the rate of Zł. 100 old to Zł. 1 new—except industrial workers and collective-farm peasants who were allowed to exchange their cash at the ration of 100 to 3; savings accounts and all bank deposits up to Zł. 100,000 were revalued at the rate of 100 to 3; wages and prices were reduced at the same ratio. The new exchange rates were: £1 = Zł. 11·20 and $1 = 4·00.

See T. Bór-Komorowski, *The Secret Army* (London, 1950); A. Żółtowski, *Border of Europe* (London, 1950). (K. SM.)

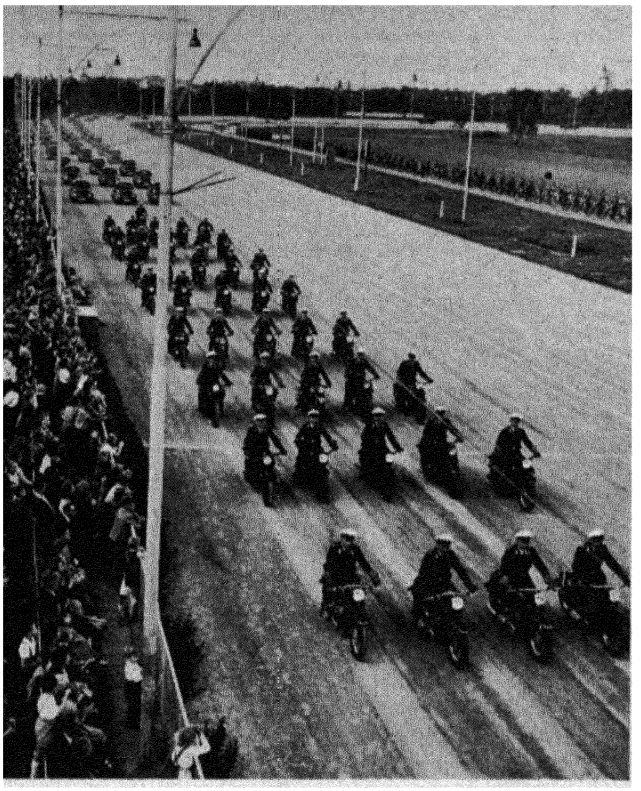
POLICE. After the bringing into effect of the Oaksey committee's recommendations on pay as from July 1, 1949, there was an improvement in recruitment to the police forces of Great Britain, though it was not uniform throughout the country; in particular, recruitment in the Metropolitan Police district and some other areas still presented a serious problem. On Aug. 1, 1949, authorized establishments of the police forces in England and Wales amounted to 70,080 men and 1,500 women, while the actual strengths were 57,756 men and 1,094 women. By Dec. 31, 1950, authorized establishments had risen to 70,938 men and 1,668 women, while the actual strengths were 61,088 men and 1,345 women. In 1939 the authorized establishments and actual strengths of men had been 63,228 and 61,364 respectively, and there had been 246 women police.

The Oaksey committee submitted their final report on Oct. 31, 1949. The most important recommendation made was that dealing with negotiating procedure. Under the Police act, 1919, conditions of service for the police must be discussed on the police councils for England and Wales and Scotland respectively; but this system, while giving the representatives of the various ranks opportunity to make representations to the police authorities and the secretary of state, did not give them any right to take their claims to arbitration. The Oaksey committee recommended that the two police councils should be replaced for this purpose by a joint council for Great Britain, consisting of representatives of the service itself on the one side and of the two departments and the local authorities on the other, with the addition of three independent members who would be empowered, subject only to the overriding authority of parliament, to issue a binding award in the case of disagreement. These proposals were discussed at a meeting of the police council held in the early part of 1950, and a committee of the council was appointed to work out the details necessary to give effect to the recommendations.

Measures were taken by the government to build up a civil defence organization, and the police had an important part to play in these plans. In most police districts the responsible local authority asked the chief constable to take charge of the wardens' organization, and steps were taken to give all police officers basic training in civil defence work. An appeal was launched for volunteers for the special constabulary.

Developments continued in the field of mechanical aids to police work. The scheme for equipping police forces with short-wave wireless proceeded, and a number of additional forces were so equipped. Valuable experiments moreover were made in the development of the team system of policing, under which the traditional system of beats was partially or largely replaced or supplemented by teams of policemen working in allocated areas from cars.

In spite of the manpower deficiencies persisting in some areas the police forces operated efficiently and successfully throughout the year, and there was no lessening of



Units of the West Berlin police force paraading at a Berlin sports stadium in Sept. 1950.

their satisfactory relationship with the public. (S. J. BKR.)

Scotland. In May, 1950, the police forces of East Lothian, Midlothian, West Lothian and Peebles were combined into a single force by a voluntary amalgamation scheme under the Police (Scotland) act, 1946. This combination, together with eight combinations which had previously taken place, had the effect of reducing the number of Scottish forces to 33 as compared with 49 before the 1946 act.

After a decline in strength of 70 policemen in 1949, the actual strength rose from 6,991 to 7,191 during 1950. The strength of policewomen rose from 134 to 139. The 1950 strength compared favourably with the prewar strength of 6,799 men and 36 women, although it fell short by 352 men and 30 women of the current authorized establishment. This establishment, which was 525 men and 133 women higher than the prewar figure, indicated the increased duties now falling on the police and the increasing recognition of the fields of police work which were suitable for women. At the end of the year, there were about 9,300 special constables of whom about 1,300 had been recruited during the year. The strength was about 5,000 below establishment.

Tulliallan castle, Kincardine-on-Forth, was acquired for conversion into a Scottish Police college. Pending its adaptation and extension, arrangements were made for using premises at Upper Butlaw, South Queensferry, for the training of higher ranks, while the training of recruits continued at Whitburn and at Glasgow. Six hundred and fifteen recruits received their 12-week initial course, and 438 their second-year course, the length of which was increased from four to six weeks.

Two meetings of the Scottish Police council were held and committees were appointed to consider recommendations made in part 2 of the report of the Oaksey committee regarding discipline, representative organizations and negotiating machinery.

Special attention was given to road safety matters and new types of statistics were instituted to facilitate research into the causes of accidents and the effects of remedial measures.

Police authorities and joint police committees were made responsible for the civil defence training and organization of the police forces and the warden section of the Civil Defence corps. Good progress was made. (C. C. C.)

United States. Police in the U.S. were increasing in number in 1950, the preceding ten years having witnessed a 20% enlargement of the ratio between police and population. Police salaries also continued their rapid upswing, reaching a 1950 average cost for cities of $6·72 per capita for local population. This level was more than 50% higher than that prevailing five years before. The highest salary paid for the rank of patrolman was $4,375, with national averages ranging between $2,520 and $2,760 per annum.

STRENGTH OF U.S. MUNICIPAL POLICE FORCES PER 1,000 INHABITANTS

Population groups of Cities	1950	1940
Group I—Over 250,000	2·44	2·12
Group II—100,000 to 250,000	1·78	1·45
Group III—50,000 to 100,000	1·76	1·37
Group IV—25,000 to 50,000	1·65	1·23
Group V—10,000 to 25,000	1·51	1·05
Group VI Less than 10,000	1·42	1·04
All cities	1·95	1·61

Enlarged quotas of police, an unparalleled wealth of equipment, increased salaries, shorter hours and liberal pension arrangements had operated to raise the formal standards of policing in the U.S. during a generation or so. But since the onset of World War II city police had been relatively unsuccessful in solving their cases and there was a marked decline in effecting arrests for burglary and larceny.

The International Association of Chiefs of Police held its 57th annual conference at Colorado Springs, Colorado, Oct. 7-12. Total registration exceeded 1,300 police administrators and conference guests. Discussions of public relations, organized gambling and Communist activities were included. (F. L. D.)

POLITICAL PARTIES, BRITISH. The parties' preparations for the general election which continued with increasing momentum from Jan. 11, when the government announced that polling would take place on Feb. 23, ended in an election campaign which was distinguished, in the opinion of many, by the restraint with which it was conducted. The Labour party's programme contained one or two minor proposals for nationalization in addition to the highly controversial commitment to bring into effect the act nationalizing the steel industry which was already on the statute book. But these measures were relegated to the background in the speeches of the Labour party leaders during the campaign and, instead, they insisted on the late government's success in warding off bankruptcy while conferring new benefits on the public and on the failure of predominantly Conservative governments before World War II to improve the social services and keep the people employed. They predicted that if the Conservatives were returned to power unemployment and large cuts in the social services would follow, since these were the only methods by which the party could carry out the deflationary policies to which it was pledged.

To this the Conservatives retorted by dwelling on the failure of some of the nationalized industries to pay their way and by pointing out that whatever boons Socialism had conferred had in reality been financed by American money and had been very largely offset by the immense increase in the cost of living caused by unintelligent government expenditure. In spite of this expenditure the government had failed to satisfy the nation's most pressing need, which was for houses. The Conservatives would at one and the same time reduce the cost of living by reducing taxation through economy in public spending and maintain and improve the social services by efficient administration. In particular, they would reduce



This cartoon "Deposit Guaranteed" by Illingworth in the "Daily Mail" (London) was published in June 1950, at a time when a few British footballers joined clubs in Colombia.

food subsidies while compensating those most severely hit by raising old age pensions and family allowances. To this the Socialists answered that economies could be made by redistributing expenditure and that the Conservative case depended on the false assumption that vast sums were being annually wasted in providing employment for civil servants.

In advocating economy the Conservatives had the Liberals on their side, but the Liberals proposed to achieve it by far more radical methods which both the other parties considered to be impracticable. Impartial commentators held that the Conservatives were right in arguing that the government expenditure had been excessive but that the opposition had failed to explain how the advantages of munificence were to be combined with those of thrift. They also predicted that the Conservatives would have the best of the argument on nationalization and the worst of it on full employment.

The result of the poll seemed to show that the country had drawn the same equivocal conclusion. Out of a House of Commons of 625 seats Labour held 315, Conservatives and their allies 298, and Liberals 9. Two Irish Nationalists and the Speaker accounted for the remaining seats. The Labour majority over all other parties shrank from nearly 150 to 6. No detailed comparison of the results of the two elections in losses and gains was possible in view of the redistribution of seats which had taken place, but Labour polled 46·4% of the votes cast compared with 48% in 1945, Conservatives and supporters 43·5% compared with 39·8%, and Liberals 9·1% compared with 9%. The 10 by-elections before the end of the year did nothing to change the distribution of power.

The election saw the triumph of the two-party system. The Liberals, who put up 475 candidates, lost 319 deposits in return for 9 successes. Independents, deprived of the sanctuary of the university seats were eliminated; the Communists lost their two members; and the monotony was only relieved by the election of the Irish Nationalists.

In a House of Commons thus divided the government whips had to keep attendance at full strength whenever an issue of confidence seemed likely to arise. Plainly the government could not go ahead with its full domestic programme and the first session of the new parliament accordingly devoted its energies to a variety of uncontroversial reforms ranging from bills relating to the maintenance of wives and the guardianship of children and adolescents, to a uniform code relating to the breaking up of streets by public utilities. The budget was passed, though not without some dangerous moments, as when government and opposition tied over a grant to the Ministry of Transport. No conspicuous economies were made.

The outbreak of the Korean war at the end of June and the consequent increase of international tension introduced a new factor into domestic politics. The government increased the period of national service to two years and announced increases in army pay. Rearmament and civil defence were accelerated and it became clear that a far larger proportion of the nations' income would have to be devoted to warlike preparations.

Labour had achieved a precarious victory at the cost of shelving large parts of its domestic programme; the election had settled nothing; the government, with one eye on the party conference and the other on the constituencies, had to balance the demand for strict Socialism and the doubts of the electorate about nationalization. In this atmosphere the 82nd annual Trades Union congress opened quietly in Brighton in September and, having offered its habitual encouragement to Ernest Bevin, the foreign secretary, proceeded on a card vote to reject the government's policy of wage restraint. It was then doubtful whether the government could rely on the trade union leaders to urge their rank and file to help in carrying through the most important part of the nation's economic policy.

Though the party executive came through the annual party conference, which opened at Margate on Oct. 2, without suffering any major defeat—a success widely attributed to the skill with which the proceedings were managed from the platform—members showed increasing signs of impatience with policies of moderation. There was a demand for a raid on profits, and not everyone was satisfied with a judicious document called *Labour and the New Society* which defined, in abstract terms, the conditions in which an industry might become eligible for nationalization while leaving the party leaders to decide which industries satisfied these conditions and when they should be nationalized. The respective tastes of the Right and Left wings were catered for without too much discordance in a statesmanlike speech from Herbert Morrison and a vigorous onslaught from Aneurin Bevan who, without committing the party to doing anything, kept the spirit of action alive with descriptions of the "miasma of private enterprise" polluting publicly owned industry.

When the second session of parliament opened on Oct. 31 the King's speech included a proposal for a bill to make available to the government "powers to regulate production and distribution and to control prices" in the interests of full employment, rearmament and the avoidance of inflation. A bill was also proposed for the transfer to the state of such shares in the sugar beet industry as were not already in the hands of the Treasury. On Sept. 14, G. R. Strauss, minister of supply, reaffirmed in the House of Commons the governments' intention to proceed with the nationalization of the iron and steel industry and announced the names of those appointed to be members of the corporation; on Oct. 9 an order was published appointing Feb. 15, 1951, to be vesting day.

The Conservative opposition, refreshed by the accession of some young and able minds, received some satisfaction

from the result of the election. Their criticisms of excessive spending were pressed home with vigour; their former zeal for the wholesale removal of controls was largely abated; and the attempt, first made in R. A. Butler's *Industrial Charter*, to work out a domestic policy consonant with the party's traditions and compatible with the welfare state, was now pursued more steadily and more unanimously than before. In October a group of Conservative members of parliament produced a pamphlet called *One Nation* which attempted an explanation in concrete terms of how economies could be combined with the maintenance of the social services and their improvement. Though critics still complained that the party underestimated the cuts that would be necessary, it was conceded that this pamphlet at least showed commonsense. The rift in the party between European federalists and anti-federalists widened and closed in two rapidly succeeding moves at the end of June when Winston Churchill put down a motion condemning the government's refusal to take part in the Schuman plan (*q.v.*) negotiations.



The Communist view of the rearmament programme as expressed in this cartoon "Taking the Weight" in the "Daily Worker" (London), Oct. 1950.

The government had refused because the French had insisted that the principle of a supra-national authority to control Europe's steel resources should be accepted in advance. This principle was as repugnant to many Conservatives as it was to Socialists and accordingly Churchill's motion appeared to threaten an open split. When the debate opened, however, it became apparent that Churchill took the view not that Britain should have accepted the conditions but that had he been prime minister they would not have been imposed, a hypothesis which put no strain on the loyalty of his supporters.

In general the party's pronouncements on foreign policy became softer in tone and more discriminating as the year went on. Shortly before polling day Churchill had issued an appeal for a last attempt to reach agreement with the U.S.S.R. on terms of equality and this was held by many to have influenced the voting in his party's favour.

In the foreign affairs debate in which Clement Attlee, the prime minister, announced his offer to go to Washington, Winston Churchill stated that if any of the critical motions of which notice had been given by Socialist back-benchers were pressed to a division, the Conservatives would vote with the government. He later explicitly stated his party's support for Attlee on his Washington mission.

From the party conference, which opened at Blackpool on Oct. 12, it became apparent that the two main planks in the party's programme were to be housing and the cost of living. In the House of Commons there had been some difference of emphasis on housing between those Conservatives who favoured caution in criticizing the government and a strict attention to what was possible in formulating plans, and those who wished to leave no doubt about the number of houses which Conservatives would build. At the conference Commander T. D. Galbraith, member of parliament for the Pollok division of Glasgow, spoke for the executive in the first sense but excited delegates, catching on to a suggestion made earlier in the debate, interrupted him with demands for 300,000 houses a year. Lord Woolton announced on the spot that the party leadership would accept the figure. It was not indeed a wholly arbitrary one for an earlier speaker had taken some pains to prove that it was possible. The Conservatives put their target of 300,000 houses a year as an amendment to the address in reply to the Speech from the Throne on Nov. 6. It was negatived by 300 votes to 288 after a heated debate. Aneurin Bevan, minister of health, re-affirmed the government's target of 200,000 and asked what other building and forms of capital expenditure the opposition would cut in order to increase it. Winston Churchill countered that the target of 300,000 was a reasonable objective.

The Liberal party, in spite of its great electoral effort, had not even the satisfaction of holding the balance between its rivals. Nevertheless, the Conservatives and Socialists were so closely matched that it was always possible that the Liberals, voting at full strength and all in the same lobby, might decide the fate of the government. Their influence in the House of Commons was largely reduced, however, by their lack of party discipline. It was impossible to predict where they would vote on any issue and frequently some of them voted on one side and some on the other. At their annual conference at Scarborough on Sept. 29 they reaffirmed their policy and their unwillingness to make electoral bargains with the Conservatives or indeed to make any bargain which would limit or reduce the number of their candidates. The blandishments of Winston Churchill, which had revived after the election in the form of a proposal to appoint a parliamentary commission (on which the three parties would be represented in proportion to the votes cast for them and on which the Liberals and Conservatives would therefore have a majority) to consider the revision of the electoral system, had fallen off by the end of the year, as the Conservatives were by then convinced that finance alone would limit the Liberal candidatures.

In March Professor Harold Laski, an ex-chairman of the Labour party and the most distinguished of its intellectuals died suddenly (*see* OBITUARIES). Few men outside parliament had exerted so profound an influence on the conduct of a political party. On Oct. 19 Sir Stafford Cripps (*q.v.*) chancellor of the exchequer, with whom the government's economic and fiscal policies had come to be identified, retired because of ill-health. (T. E. U.)

POLITICAL PARTIES, U.S. During the year the Democratic party, still in power after 17 years, suffered from reverses at the polls and from intraparty dissensions involving leading members of the congress. Although the Republican party made solid congressional and gubernatorial gains in the 1950 elections, their national strength suffered somewhat from a division over foreign and domestic policy.

Democratic Party. In the elections of Nov. 7 the Democrats lost 5 seats in the Senate and 30 in the House of Representatives, leaving them a margin of only 2 in the upper chamber and 35 in the lower. They lost 6 governorships to the Republicans, which gave the G.O.P. control of 25 of the 48 state governments. The Democrats professed to find consolation from the fact that their 1950 losses were fewer than in such off-years as 1934, 1938, 1942 and 1946. But there were certain features of the 1950 rebuff that seemed to offset these comforting conclusions. The Democratic vote in the great cities—New York, Pittsburgh, Cleveland, Chicago, San

Francisco, Los Angeles—was the lowest figure since pre-Roosevelt days. This indicated that many groups once loyal to New Deal-Fair Deal policies and promises—Labour, Liberals and racial blocs, especially the Negroes—had fallen away. It was also considered significant that several Democratic leaders, including Scott W. Lucas of Illinois and Francis J. Myers of Pennsylvania, were defeated. Moreover, many severe critics of the administration, notably Senator Robert A. Taft of Ohio, won by record majorities.

The outcome was a surprise to President Harry S. Truman (*q.v.*) and William M. Boyle, Jr., the national chairman, who had forecast an easy victory. Boyle was especially concerned over the party's poor showing in industrial and rural areas, for it had been the loose alliance of Labour and farm groups that accounted for so many past triumphs. President Truman said he was not disappointed with the election results and declared he would resubmit his Fair Deal programme to the 82nd congress, opening in Jan. 1952. But even as he spoke, military reverses in Korea and the threat of a third world war made it clear that, as in 1941, social and economic reforms would be laid aside on Capitol Hill for an indefinite period.

The congressional line-up resulting from the November contest forecast party difficulties. The coalition of Republicans and conservative southern Democrats, which had blocked the enactment of Truman's principal legislative proposals for five years, had been strengthened. Only on demands for rearming the United States and its overseas allies against the Soviet menace could the president be sure of support. Indeed, on this question the congress had long been more forward than the executive branch. The break-up of several once-dominant city party-machines was another 1950 set-back for the Democrats. The 1949 dethronement of "boss" Frank Hague of New Jersey was made more permanent. Tammany's mayoralty candidate, Ferdinand Pecora, was beaten by an independent, Vincent Impellitteri.

Southern Democrats continued to harass the Truman-Boyle "regulars" with James F. Byrnes of South Carolina as spokesman. Although Byrnes was once Truman's close personal friend and secretary of state, they broke after Byrnes made a speech in 1949 in which he said that, unless Fair Deal legislation were checked, every citizen would become an "economic slave pulling an oar in the galley of the state." After this speech Truman wrote to Byrnes to suggest that his was another *et tu, Brute* act. Byrnes replied that he did not consider himself a Brutus nor Truman a Caesar.

Although a septuagenarian, Byrnes ran for governor and won without opposition. He indicated that he might use his office and prestige to organize a southern faction antagonistic to Truman's renomination and re-election. Two other southerners who indicated dissatisfaction with the administration's domestic programme, although supporting the White House on foreign policy, were Senators Harry F. Byrd of Virginia and Jesse H. Jones of Texas. An anti-Truman movement headed by men of this type, Democratic politicians feared, might mobilize a far more powerful revolt in 1952 than the "Dixiecrat" rebellion of 1948, which cost Truman the states of South Carolina, Louisiana, Alabama and Mississippi.

The Republican Party. The factors behind the Republican revival were encouraging to party tacticians. There was a great decline in the Democratic vote in large cities and industrial centres and an apparent return of rural areas to the G.O.P. The Republicans immediately began to forecast a presidential triumph in 1952, and, indeed, they held a December meeting at Washington, D.C., to make plans for breaking the "solid south." At this conference Senator Robert A. Taft, who had been re-elected by a record vote in the face of Labour's attempt to defeat him, expressed confidence for 1952, and said that several border and southern states could be captured by the Republicans.

Party divisions appeared as early as Jan. 1950, when Guy George Gabrielson, the national chairman, proposed a draft of party principles by a committee representing the Senate and House Republicans and the national committee. The final production branded the Truman Fair Deal as "socialist." Ominous cracks in party solidarity marked this effort, however. Six Republican governors, headed by James H. Duff of Pennsylvania, who was elected to the Senate in November on a moderately liberal platform, urged the Gabrielson group to abandon "backward-looking" and to rebuild along "progressive" lines.

The Republican statement declared for economy and a balanced budget, repeal of wartime excise taxes, the Taft-Hartley act, social security expansion, federal aid to states for medical advancement (as against Truman's national health insurance), elimination of fellow travellers from the State Department, and protection of minorities (as against Truman's broad civil rights programme). Gabrielson described this mid-term enunciation as more liberal than the Dewey-Warren platform of 1948. But the Dewey faction disagreed. A group of four senators, headed by Irving M. Ives of New York, denounced it as a "collection of vague generalities."

The party statement on foreign policy was generally satisfactory, winning the endorsement of Senators Arthur H. Vandenberg of Michigan, advocate of a "bipartisan" foreign policy, and Kenneth S. Wherry of Nebraska, who leaned towards isolationism. It urged continued co-operation with the administration on foreign affairs, but it criticized "secret agreements" at Yalta and Potsdam as responsible for postwar difficulties with the U.S.S.R.

Other Parties. Political insurgency almost disappeared in 1950. The reasons behind this practical liquidation of independent movements were high employment and wages, an increasingly aggressive Soviet policy against the western world and the natural return of various voting elements to their traditional allegiances.

Henry A. Wallace, founder and 1948 presidential nominee of the American Progressive party, announced that he had resigned because of its extreme pro-Moscow policies. His desertion had no effect on the party's programme, as formulated at a September convention in Chicago. The national committee's policy statement blamed "big business and big brass" in the U.S. for the Korean conflict, and charged that the U.S. sought to suppress the "liberation movements of the peoples of Asia and Africa."

Another distinguished rebel, Norman Thomas, announced that he would not run a seventh time in 1952 as the Socialist party's presidential candidate. He urged concentration on educational and promotional activities, and infiltration into the major parties in an attempt to influence their policies. His programme was rejected overwhelmingly at the party's June national convention in Detroit. The 150 delegates voted to enter tickets in national and local contests, although advising against "futile running of candidates as a ritual." Party members were given permission to join independent and union labour political committees, but they were forbidden to vote for "candidates running in the capitalist parties." Thomas characterized the political decision as "utterly unrealistic."

The election of Nov. 7 revealed Wallace and Thomas to be true prophets. In New York City, Vito Marcantonio, of the American Labour party, the New York branch of the American Progressive party, and its only spokesman in congress, was defeated. The A.L.P.'s gubernatorial candidate in New York polled only 209,294 votes, as against Wallace's 509,599 in the 1948 presidential contest. In short, it had been reduced in its banner state to a small core of Marcantonio's own constituents on the upper East Side, Communists and fellow-travellers of various shades.

The American Liberal party, which represented the more extreme Rooseveltian faction of the Democrats, also made a poor showing. In the Senate, gubernatorial and mayoralty contests, their vote was approximately 200,000 less than in previous years. (*See* also ELECTIONS; UNITED STATES.)

(R. TU.)

POLO. Four new polo clubs were started in England in 1950: Sutton Place, the Duke of Sutherland's club near Guildford; Orford, in Suffolk; the Silver Legs club near Bishop's Stortford; and Canford Magna near Wimborne. These brought the number of clubs playing in England up to 12. The standard of polo was higher than in any year since World War II. The outstanding teams were Sussex, Oxfordshire and Middlesex.

A visiting Argentine team from Paris was beaten in the semi-finals of the Roehampton cup by Oxfordshire, who in turn lost by half a goal to Sussex in an exciting final. The Argentines however won the Neil Haig cup, beating Middlesex. Other tournaments were held at Cowdray park (during Goodwood week), at Henley-on-Thames, at the Rhinefield club and at Sutton place. All were successfully concluded in spite of bad weather.

Some high-class ponies were imported from Argentina, as well as a few from the U.S., to meet the shortage. But some top-class young English ponies were also brought into the game. The Royal Navy team was revived, under Vice-Admiral Earl Mountbatten of Burma. (J. C. G.)

POPULATIONS OF THE COUNTRIES OF THE WORLD: *see* AREAS AND POPULATIONS OF THE COUNTRIES OF THE WORLD.

PORTUGAL. Republic of southwestern Europe, forming part of the Iberian peninsula and bounded E. and N. by Spain. Area: 35,413 sq.mi., including Azores (888 sq.mi.) and Madeira (302 sq.mi.). Pop.: (1940 census) 7,722,152; (mid-1949 est.) 8,491,000, including Azores (1940 census, 286,885) and Madeira (250,124). Language: Portuguese. Religion: predominantly Roman Catholic. Chief towns (pop., 1940 census): Lisbon (cap., 709,179); Oporto (262,309); Funchal, Madeira (54,856); Coimbra (35,437). President of the republic, Marshal António Oscar de Fragoso Carmona; prime minister, Dr. António de Oliveira Salazar.

History. A major cabinet reorganization, announced on July 31, 1950, included the creation of three new ministries: Presidency (Costa Leite), Defence (Santos Costa) and Corporations (Soares de Fonseca). The two former, integrated in the Presidency of the Council, lightened the administrative burden weighing on Salazar; the third was previously an under secretaryship. Six other ministries changed hands, Trigo de Negreiros becoming minister of the interior, Aguedo de Oliveira of finance, Brigadier Abranches Pinto of the army, Paulo Cunha of foreign affairs, Commander Sarmento Rodrigues of colonies, and Ulisses Cortes of economy. Communist trials included one of seven men accused of planning to overthrow the government and assassinate the prime minister.

The 1950 budget showed little change from 1949 in ordinary expenditure (Es. 4,300 million), while extraordinary expenditure was down by nearly one-third to Es. 900 million. Total receipts were estimated to allow a credit balance of Es. 3 million. There was no increase in taxation, and export duties were substantially reduced. The financial year 1949 closed with a surplus of Es. 47 million. Steep increases in import duties on various manufactured goods—cars, electrical equipment, industrial machinery and tools—were imposed in September in protection of new industries and of the country's trade balance: ranging from 10% to 1,000%, they averaged about 50%.

E.R.P. aid to Portugal in the second year (1949-50) amounted to $31·5 million, of which $27·5 million were long-term loans and the remaining $4 million convertible grants. Hydro-electric development, the rebuilding of the merchant navy, and the equipping of certain basic industries were first charges on the National Development fund. Import restrictions on goods from Spain were lifted in March, in furtherance of the O.E.E.C. policy of freeing intra-European trade. A claim from Great Britain, France and the United States for the surrender of 43·9 tons of gold, alleged to be German war-loot deposited in Portugal, was contested by the Portuguese government. Sharp falls in sardine catches for the second year in succession, indicating the possibility that the fish might be leaving Portuguese waters, severely hit the important sardine-packing industry. (The 1949 catch was 34,000 metric tons, as compared with 120,000 tons in 1944). Towards the end of the year, however, the sardines returned to Portuguese waters.

Portugal, not having requested U.S. military assistance along with the other North Atlantic treaty powers in the autumn of 1949, did so in August, and a survey mission of the U.S. State and Defence departments visited Lisbon to examine the request. The longest Portuguese naval manoeuvres for 25 years, lasting 2½ months, ended on July 31. Three destroyers later took part in combined exercises with the British home fleet in the Gibraltar area. Twenty-five U.S. warships visited Lisbon in May for the annual change-over of the U.S. Mediterranean squadron, usually held at Villefranche: they formed the largest and most powerful naval combination ever seen in the Tagus, with a total complement of 20,000 officers and men. Visa requirements for travellers spending only a few days in Portugal were lifted on May 1, and by an agreement of Aug. 25 the reciprocal exemption from visas already in force with the U.S. was extended to include Madeira.

Mme. Guilhermina Suggia (*see* OBITUARIES), the world-famous cellist, died in July, aged 62; Duarte Leite, prime minister in 1912 and a notable historian and writer, in September, aged 86; and António Maria da Silva (*see* OBITUARIES), prime minister in 1920 (twice) and again in 1926, when the revolution of May 28 brought the present regime to power, in October at the age of 78. (W. C. AN.)

Education. Schools (1947-48): primary 10,411, pupils 549,712, teachers 14,080; private elementary, pupils 59,938; secondary (*liceus*) 43, pupils 20,642, teachers 1,063; private secondary, pupils 24,974; technical 58, pupils 39,151, teachers 1,527; commercial 8, pupils 3,125, teachers 204; colonial high school, students 134, professors 17; universities 3, students 8,629, professors and lecturers 467; institutions of higher education 3, students 4,717, professors and lecturers 284. Illiteracy (1940): 49%.

Agriculture and Fisheries. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 411 (561); barley 101; oats 109; maize 220; rye 133 (158); rice, paddy 74; potatoes (1948) 994; dry beans 59; grapes, total 1,360. Production of wine (1948) 818,000 metric tons. Production of olive oil (1949) 89,000 metric tons. Livestock ('000 head, Dec. 1948): cattle 1,000; sheep 4,000; pigs 1,200. Meat production (1949) 79,000 metric tons. Fisheries, total catch (1949): weight 184,347 metric tons; value Es. 882 million.

Industry. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 444 (209); lignite 112 (46); manufactured gas (million cu. metres) 38 (21); electricity (million kw.hr.) 834 (459). Raw materials (metric tons): lead (1949) 2,040; tin ores (1948) 1,856; wolfram (1948) 2,617; pyrites (1948) 565; cork (1948) 131,459; kaolin (1948) 25,849. Manufactured goods ('000 metric tons, 1949): cement 518; cotton piecegoods 24; cotton yarn 30·4.

Foreign Trade. (Millión escudos, 1949; 1950, six months, in brackets) imports 9,048 (4,051); exports 4,092 (2,062). Main sources of imports (1949): U.K. 25%; U.S. 17·8%; Portuguese colonies 12·8%. Main destinations of exports (1949): Portuguese colonies 26·3%; U.K. 19·6%; U.S. 10·1%. Main imports (1949): wheat grain and flour 8·7%; ships 8·3%; industrial machinery and equipment 7·8%; raw cotton 6·1%. Main exports (1949): textiles 16·6%; cork and manufactures 16·2%; port and other wines 14·7%; sardines and other tinned fish 10·9%.

Transport and Communications. Roads (1948): 16,276 mi. Licensed motor vehicles (Dec. 1949): cars 61,000; commercial 20,000. Railways (1948): 2,240 mi.; passenger-mi. (1948) 810 million; freight carried ('000 tons, 1949) 3,600. Shipping (July 1949): merchant vessels over 100 gross tons 338; total tonnage 526,373. Telephones (1948): 124,639. Wireless licences (1949): 187,385.

Finance and Banking. (Million escudos) Budget: (1949 actual) revenue 5,667·3, expenditure 5,666·4; (1950 est.) revenue 5,271·5, expenditure 5,268·3. National debt (1948): 12,515. Currency circulation (Aug. 1949; Aug. 1950 in brackets): 7,870 (7,680). Bank deposits (July 1949; July 1950 in brackets): 16,850 (16,640). Monetary unit: *escudo* with an exchange rate (Nov. 1950) of Es. 80·50 to the pound and Es. 28·75 to the U.S. dollar.

PORTUGUESE COLONIAL EMPIRE. Under this heading are grouped the Portuguese possessions in Africa and Asia. Their total area is approximately 803,835 sq.mi. and the total population (mid-1947 est.) 12,736,000. Certain essential facts and figures relating to the Portuguese colonies are given in the accompanying table.

History. Substantial progress was made on the construction of the main dam in the new hydro-electric works at Mabubas, on the river Dande, Angola. This undertaking, among the largest ever carried out in the colony, was expected to revolutionize industrial development in Luanda, the capital. A 20-year agreement concerning the port and railway of Beira, capital of Mozambique, was concluded in Lisbon on June 17 between the Portuguese, British and Southern Rhodesian governments. By it Portugal undertook to maintain the port and railway in a state adequate to traffic from the Rhodesias, to exempt from transit dues goods passing through Beira, and to establish a free zone in the port. The British and South Rhodesian governments guaranteed sufficient traffic to keep the port busy. The Economic Co-operation administration provided $57,500 for a survey to lay the groundwork both for better railways between Southern Rhodesia and Mozambique and for port improvements at Beira and Lourenço Marques. In October the Portuguese government applied to the same agency for a loan towards the construction of a new quay at Beira. Portugal agreed in October to co-operate with Southern Rhodesia in laying an oil pipeline from Beira to Umtali, 200 mi. away and 3,750 ft. above sea level.

François Christiaan Erasmus, South African minister of defence, visited Lisbon in October for talks with the Portuguese ministers of defence and colonies, and said that a Communist attack on any part of the African continent would be regarded as an attack on the Union of South Africa and fought with all its resources.

As a consequence of less attractive labour conditions in India after its independence, the trend of emigration from Gôa shifted from India to British and Portuguese East Africa. Remittances sent home by emigrants continued to play a large part in making up the heavily adverse trade

PORTUGUESE COLONIAL EMPIRE

Country	*Area* (in sq.mi.)	*Population* (1947 est.; percentages as of 1940)	*Capital, Status, Governor*	*Principal Products Exports*—1948 (in metric tons)	*Imports and Exports* ('000 escudos) 1948	*Road, Rail and Shipping*	*Revenue and Expenditure* ('000 escudos)
AFRICA							
ANGOLA	481,351	4,495,000 (Europeans 1·2; Negroes 98·7%)	São Paulo de Luanda (pop. 40,000); colony; Governor general, Captain Silva Carvalho	coffee 53,404 beans 47,897 sugar (raw) 36,964 sisal 15,842 fish 15,177 palm oil 8,502 diamonds (carats) 672,985	imp. 1,215,614 exp. 1,090,949	rds. (1949) 21,772 mi. rly. (1949) 1,711 mi. shipping (entered, 1948): vessels 515 net tonnage 1,274,530	(1949 est.) balanced at 791,285
CAPE VERDE IS.	1,557	168,000 (Europeans 3%; Half-castes 65%; Negroes 32%)	Praia (pop., 6,000); colony; Governor, Major Dr. Albertò Alvez Roçadas	mineral oil 401,173 coal 75,862 fish 246 hides and skins 58	1948 imp. 403,102 exp. 237,959	rds. (1947) 344 mi. shipping. (entered, 1948): vessels 989 net tonnage 3,638,530	(1949 est.) balanced at 46,758
PORTUGUESE GUINEA	13,948	422,000 (Europeans 0·4%; Negroes 98·9%)	Bissau; colony. Governor, Raimundo Serrão	groundnuts 39,195 coconuts 12,121 rice 1,568 hides and skins 387 wax 182	imp.(1948) imp. 185,162 exp. 129,114	rds. (1947) 1,818 mi. shpg. (entered, 1948): vessels 64 net tonnage 74,205	(1949 est.) balanced at 64,230
SÃO TOMÉ AND PRINCIPE ISLANDS	372	57,000 (Europeans 2%; Negroes 94%)	São Tomé (pop., 3,187); colony; Governor, Major Carlos de Sousa Gorgulho	coconuts 34,112 copra 26,987 palm oil 19,328 cocoa 6,967	(1948) imp. 109,133 exp. 219,645	rds. (1948) 203 mi. rly. (1949) 10 mi. shpg. (entered, 1948): vessels 118 net tonnage 451,862	(1949 est.) balanced at 43,399
MOZAMBIQUE (Portuguese East Africa)	297,731	6,116,000 (Europeans 0·5%; Negroes 99%)	Lourenço Marques (pop., 48,000); colony; Governor general, Captain Gabriel Mauricio Teixeira	sugar (raw) 54,236 copra 41,823 cotton 25,978 sisal 15,074	(1948) imp. 1,880,099 exp. 991,637	rds. (1949) 17,992 mi. rly. (1949) 1,527 mi. shpg. (entered, 1948): vessels 1,678 net tonnage 2,820,869	(1948, actual) rev. 1,390,664 exp. 1,286,592
ASIA							
PORTUGUESE INDIA	1,538	657,000	Nova Gôa; metropolitan province; Governor general, Commander Fernando Quintanilha de Mendonça Dias	coconuts, fish, spices, cajunuts, salt and copra	(1947) imp. 338,859 exp. 50,524	rds. (1949) 446 mi. shpg. (entered, 1948): vessels 3,450 net tonnage 1,149,915	(1949 est.) balanced at 88,970
MACAO	6·2	387,000 (Europeans 0·5%; Asiatics 98·6%)	Macao; colony; Governor, Commander Albano Rodrigues de Oliveira	fish and cement	('000 patacas†, 1947) imp. 25,315 exp. 9,746	shpg. (entered, 1947): vessels 9,502 tonnage 1,221,256	(1949 est.) balanced at 95,109
TIMOR	7,332	433,000*	Dilli (pop., 7,000); colony; Governor, Captain Cesar de Serpa Rosa	coffee, sandalwood, sandalroot, copra and wax	('000 escudos, 1948) imp. 51,461 exp. 6,326	shipping. (1948): vessels 144 tonnage 27,182	(1949 est.) balanced at 57,880

* Native population only. † Pataca = 16·07 escudos.

balance in Gôanese economy. By an agreement with the Holy See the Portuguese government renounced its rights, under the " Patronate of the Orient," in the nomination to the bishoprics of Mangalor, Quilon, Trichinopoly, Cochin, S. Tomé de Meliapor and Bombay.

Minor incidents affecting China and Macao were reported. Portuguese troops opened fire on a Chinese patrolboat which violated territorial waters near Macao on March 6. The Chinese returned the fire and withdrew, it was believed, with casualties. Portugal rejected a charge of having several times flown over Chinese territory in October and November, saying that it had no air forces in Macao. (W. C. AN.)

POST OFFICE. The total value of post office transactions with the public in Great Britain during the year ended March 31, 1950, was £3,060,740,000. This was an increase of over £7 million on the figure for the preceding 12 months.

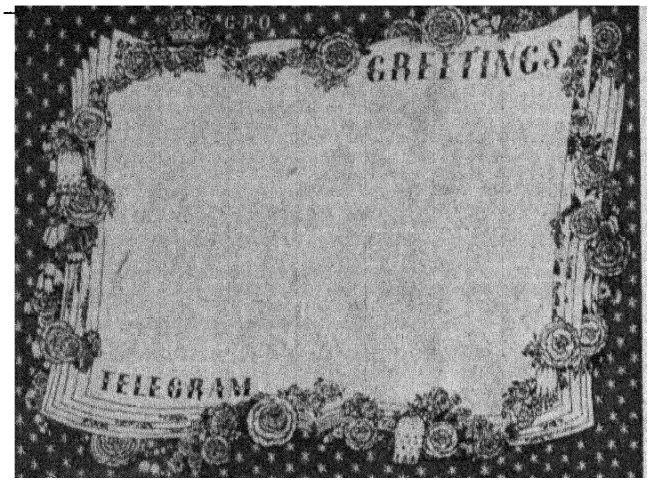
Postal. The number of letters and letter packets, etc., posted during 1949-50 was estimated to have been 8,450 million, an increase of 400 million on the traffic for 1948-49. The number of parcels handled during the year rose from 239,601,000 to 243,381,000. This latter figure included 13,555,000 received from abroad, of which about 3,626,000 were gift food parcels from the Commonweatlh.

By the beginning of Jan. 1950 the facility for sending second class mail (printed papers, commercial papers, samples, small packets and literature for the blind) by air mail, at reduced rates of postage, had been extended to cover all extra-European countries in the eastern hemisphere to which the first class air mail service was in operation. Air parcel services, previously available to countries in Europe, were extended in May to North America and to Commonwealth countries in Africa, and by September were available also to Australasia, New Zealand and the Middle east.

On Oct. 1 certain of the rates of postage on civilian correspondence addressed to overseas countries were increased in accordance with the requirements of the Universal Postal convention. The principal changes were in the postage on surface letters and postcards for foreign countries generally, that for letters up to an ounce in weight becoming 4*d.* instead of 3*d.* and for postcards 2½*d.* instead of 2*d.* The postage rate for printed papers generally was increased from 1*d.* to 1½*d.* for the first two ounces but the rate of 1*d.* for the first two ounces was retained, under certain condition, for newspapers, periodicals, pamphlets, books, sheets of music and maps. The postage rate for letters and postcards addressed to countries in the Commonwealth and to a few foreign countries and based on special agreements with the countries concerned, permitted under the Universal Postal convention, were not changed.

The compensation payable in respect of the loss of a registered article sent to or from a place abroad was increased to £2 18*s.* on June 1, 1950, and the maximum amounts of compensation paid for the loss of or damage to an uninsured parcel in the international service were also increased.

Telecommunications. The number of telegrams handled during the year ended March 31, 1950, was 52,536,000, of which 10,562,000 were overseas telegrams, the comparable total for the preceding year was 53,661,000 including 10,265,000 overseas telegrams. The manual switching system (whereby retransmission of telegrams at intermediate offices was avoided by providing a direct connection for the through transmission of telegrams) now embraced over 260 telegraph offices. This expansion of the manual switching system made possible the continuation of the progressive reduction in the average length of time for transmission over the network, which was by 1950 within ten minutes of the prewar average. Plans for the gradual introduction of an automatic switching system were further advanced and it was probable that the first stage would be brought into service by the end of 1950.



The greetings telegram form designed by Claudia Freedman which was used when the service was reintroduced in Nov. 1950.

The number of telephones in service was increased from 4,919,203 to 5,171,491—a net increase of 252,288 representing an actual rate of installation of over 52,000 a month and a rate of cessation of over 31,000 a month. The number of working exchange lines rose by 2·7% from 2,952,416 to 3,032,114—a net increase of 79,698 representing an actual monthly rate of installation and cessation of nearly 25,000 and 18,000 respectively. About 380,000 applications for telephone service were received during the year. The total number on the waiting list was nevertheless reduced from 560,000 to 551,600 despite the limitations imposed by restriction on manpower and materials. The number of long-distance circuits in the public network was increased from 15,562 to 16,340. The total number of inland telephone calls handled was 3,175 million of which 2,940 million were untimed; this represented an increase of 4% in the timed and untimed traffic. On March 31, 1950, there were 4,091 automatic and 1,775 manual local exchanges and 238 auto-manual and trunk exchanges in service in Great Britain and Northern Ireland.

On the ship-shore radio communication services over 12·5 million words of traffic were exchanged with ships at sea during 1949, and over 20,000 radiotelephone calls were made between ships and telephone subscribers ashore. In 1950 the post office owned and operated 11 coast stations in the United Kingdom for communicating to ships.

On April 1, 1950, the oversea telegraph services operated by Cable and Wireless, Ltd., in the United Kingdom were transferred to and integrated with those of the post office and became known as Post Office Cable and Wireless services, operated through the central telegraph station at Electra house, London, 4 outlying wireless stations and 35 branch offices and agencies in London, the provinces, Scotland and Northern Ireland. Cable and Wireless, Ltd., remained a separate state-owned company operating the Porthcurno cable station, Cornwall, the 150,000 mi. " *via* Imperial " cable network and its own stations in many Commonwealth and foreign countries.

Savings Bank. Deposits for the year ended March 31, 1950, amounted to £349,444,000, a decrease of £22,425,000 on the sums deposited in 1948-49. The number of separate deposit accounts at the end of March 1950 was 23,453,000; on Dec. 31, 1949, the total amount due to depositors stood at £1,947,615,000. For the year ended March 31, 1950, 20,511,000 saving certificate documents were issued.

Personnel. In March 1950 post office personnel numbered 351,789 with a salary and wage bill of £120,415,231 a year. (G. P. O.)

United States. Revenues of the post office department for the fiscal year 1949-50 amounted to $1,677,486,967. Estimated postage that would have been collected if the service had been on a regular pay basis in the case of penalty and franked mail, free-in-county mail, differentials in second-class mail matter and free matter for the blind, and the cost of aircraft service over the postage revenue derived from air mail amounted to $120 million.

The expenditures of the department for the fiscal year amounted to $2,222,949,082, of which amount $119,568,535 was on account of previous years. There was $120,938,636 unpaid on account of the 1950 fiscal year. This left a total expense of $2,224,319,182 resulting in a gross operating deficit on accrual of $546,832,215. This amount did not include pending retroactive payments to railways, but included a 25% interim increase granted to participating railways by the Interstate Commerce commission. It also included the estimated increased cost for pending establishment of permanent rates on air mail routes by the Civil Aeronautics board. During the fiscal year ended June 30, 1950, 1,230 million free pieces weighing 87·5 million lb. were mailed for other government departments, an increase of 22 million pieces and 6·3 million lb. over 1949.

On June 30, 1950, war savings stamps were on sale at 41,464 offices. Sales from July 1, 1949, to June 30, 1950, amounted to $13,876,750. During the fiscal year savings bonds with a sale value of $328,423,688 were sold. At the close of the fiscal year 1950 bonds were on sale at 26,563 post offices.

Through the 41,464 post offices and 3,951 stations being conducted under contract agreement, as well as 2,236 stations and branches, there were received, transported and delivered 45,060 million pieces of mail matter during the fiscal year having a weight of 11,525 million lb., an increase of 1,505 million pieces but a decrease of 100 million lb. from the previous year.

Delivery service was established in 219 additional cities during the fiscal year, thereby increasing to 4,632 the number of cities in which this service was operated.

During 1950 it was impossible to deliver 18,922,309 letters, an increase of 4·63% from the previous year. A total of 3,881,790 letters were returned to the senders. Letters containing valuable enclosures numbered 368,554 of which 89,825 contained money amounting to $196,225. There were also 788,964 unclaimed parcels and articles found loose in the mails. A total of 135,312 were returned to the senders. The remaining 653,652 parcels were sold at public auctions and $211,699 were realized.

On June 30, 1950, there were 158,977 mi. of domestic air mail routes in the United States—an increase of 3,663 mi. over the previous year. Eight new domestic air mail routes were established. A new six-cent stamped air mail envelope was placed on sale for the first time during 1950.

The rural delivery routes in operation on June 30, 1950, required a total daily travel of 1,486,098 mi. by rural carriers in providing service to 31,457,836 patrons. Operation of the service resulted in an expenditure of $162,787,400 for the fiscal year compared with $152·8 million for the previous year. Amounts saved through consolidation of routes were utilized to establish new routes and provide extension of existing routes.

Postal savings depositors numbered 3,779,784 for 1950, a decrease of 4·66% from the preceding year. The balance due to depositors by outstanding certificates of deposits was $3,097,061,857, a decrease of $180,111,449 or 5·5%. In addition there was held in trust for depositors accrued interest of $113,302,612 and unclaimed deposits of $254,592, making a total of $3,210,619,061. At the end of the fiscal year, postal savings certificates were on sale at 8,233 depositories, including 1,020 branches and stations, and savings stamps were on sale at all post offices and practically all branches and stations. (*See* also PHILATELY; TELEGRAPHY; TELEPHONE.) (I. GG.)

POTATOES: *see* ROOT CROPS.

POULTRY. Britain's poultry industry, still restricted by the continued rationing of feedingstuffs, nevertheless, made certain advances in 1950.

Agricultural returns for June showed that in England and Wales the poultry population had risen from approximately 61 million in 1949 to slightly more than 65 million. The greatest increase was recorded in laying fowls. Geese and turkeys, on the other hand, were fewer, geese dropping from 938,000 in 1949 to 795,000, turkeys from 800,000 to 750,000. These falls and a corresponding percentage decrease in the number of ducks may have been due to the rise in rearing costs that resulted from the removal of the subsidies on feedingstuffs early in the year: costs rose in the majority of cases by as much as £10 a ton. Being gross feeders, the larger fowls reared mainly for table purposes had to give way to those reared mainly for the production of eggs.

Scotland's poultry population of 10 million in 1949 rose by nearly 200,000 in 12 months with, again, heavy falls in the gross-feeding classes.

Northern Ireland showed an all-round fall from 24,500,000 in 1949 to 20,703,800 in 1950. Individual figures were: ordinary fowl 19,593,400, turkeys 395,000, geese 109,700 and ducks 605,700.

For the first time since eggs became a rationed commodity in Great Britain during World War II, they were sufficiently plentiful, for a short period in 1950, to permit "free" sales. Indications were that this would be repeated in 1951.

The removal of price-control from table poultry had the result that, except at certain periods of the year when the cullage of flocks was heavy, poultry meat was beyond the means of the average consumer. The Ministry of Agriculture, however, set up a committee to work on graded poultry with a view to vastly improved marketing methods.

Outbreaks of Newcastle disease (fowl pest) in certain parts of the country led to the official adoption of measures to stamp it out. Orders prohibiting the movement of stock from districts surrounding London, Manchester, Cardiff, Liverpool and other main centres continued to operate. Scotland, hitherto unaffected by the disease, suffered a number of outbreaks, the cause of which was not satisfactorily determined.

Near-European countries and the British dominions, with the exception of Canada, filled gaps in the British home markets. In the case of Canada British contracts were either broken or not renewed, and poultrymen there were left to find other markets or reduce production. (*See* VETERINARY MEDICINE). (C. G. M.)

POWELL, CECIL FRANK, English physicist (b. Tonbridge, Kent, Dec. 5, 1903) was educated at Judd school, Tonbridge, and at Sidney Sussex college, Cambridge, where he was a scholar. After gaining first-class honours in parts I and II of the Natural Science tripos in 1924-25 he worked for a time under C. T. R. Wilson, studying the condensation of steam. From Cambridge he went in 1928 to Bristol to be research assistant to A. M. Tyndall. His earliest researches here were concerned with the discharge of electricity in gases, on which he published many papers. In 1935 he visited the West Indies in the scientific expedition organized by the Royal Society and the Colonial Office to investigate earthquakes and volcanos.

In 1938 he built a Cockcroft generator and began to work on problems in nuclear physics. An experimenter of the highest technical skill, he evolved and perfected by 1946 a method of observing the tracks of elementary particles by means of an instrument combining a photographic emulsion and a microscope. This instrument found its widest application in nuclear physics, and by 1950 its use had led to important

discoveries. Of these the discovery by Powell and his collaborators G. P. S. Occhialini and C. M. G. Lattes of the heavier π meson in 1947 was one of the most fundamental. Powell also carried out intensive researches on the nature of the primary cosmic rays by exposing his special plates at high mountain altitudes. He was awarded the Vernon Boys prize by the Physical Society of London in 1947 and the Nobel prize for physics in 1950. He was Melville Wills professor of physics in Bristol university since 1948 and a fellow of the Royal Society since 1940. Powell was joint author with Occhialini of a monograph on *Nuclear Physics in Photographs* (1947) and published numerous other works. (W. J. Bp.)

PRASAD, RAJENDRA, Indian statesman (b. Saran District, Bihar, India, Sept. 3, 1884), was educated at the Presidency college, Calcutta. In 1920 he gave up a promising legal career and joined Mahatma Gandhi in his non-co-operation movement. (Prasad's publications included two books on Gandhi, an autobiography and political works.) He later became general secretary of the Indian National Congress party and a member of its working committee, and in 1934 and 1939 was president of the annual sessions of the party. From 1947 to 1950 he was Congress party president. After the disastrous earthquakes in Bihar in 1934, he worked unceasingly, in spite of ill-health, as head of the relief organization. He was often imprisoned for his part in the civil disobedience movement, his last term being from 1942 to 1945. His only cabinet office was that of member (later minister) for agriculture and food in the interim and fully constituted governments of 1946-48. He was chairman of the Constituent Assembly from Dec. 1946 and, two days before the proclamation of the Republic of India on Jan. 26, 1950, was named its first president. When he opened the first republican parliament on Jan. 31, the president said that it was the firm policy of the government to maintain friendship with all other nations and, addressing an emergency session at the end of July, emphasized that the Korean conflict had made it " even more necessary than before that there should be co-operation among independent countries of Asia." Earlier in the same month he had welcomed Crown Prince Jean and other members of the Luxembourg royal family to Delhi. Among the president's visits during the year were those to Bombay on April 5 when prohibition was inaugurated; and to the National Defence academy and the Doon school, Dehra Dun, Uttar Pradesh, in October.

PRESBYTERIAN CHURCH. Europe. The eastern section of the World Presbyterian alliance met in Strasbourg, France, from Aug. 24 to 28, 1950. Twelve nations were represented by 20 European churches at this meeting. No delegates were present from churches outside Europe, and the need for new sections in Asia, Australasia and Africa, where many younger churches were arising, was discussed. In addition to the work within each branch of this section the matter of union was foremost. To avoid obstacles to union where doctrinal issues had arisen, the Strasbourg conference emphasized the fact that the Reformed doctrine is " founded on the Word of God," and goes beyond Calvin to the Bible as its foundation. The work of reconstruction and aid to displaced persons was furthered during the year by continued assistance from churches in the U.S.

United States. In 1950 the western section of Reformed Churches acknowledging the Presbyterian system numbered, within the United States, 12 branches and included 18,461 ministers, 18,571 churches and 4,521,607 communicant members.

Negotiations for union among the various members of the World Presbyterian alliance were carried on during the year. The United Presbyterian Church of North America was negotiating for a union with the Reformed Church in America, the Associate Reformed Presbyterian Church, the Presbyterian Church in the United States (Southern) and the Presbyterian Church in the United States of America (Northern). A plan for union of the latter two bodies was also in the process of development.

The Presbyterian and Reformed Churches were also participating actively in a programme of union beyond the reaches of the alliance. In Dec. 1949 the Greenwich conference, comprising delegates from churches with a combined membership of 15 million, was held and an organization known as the Conference on Church Union was formed. Delegates from the Presbyterian Church, U.S., and from the Evangelical and Reformed Church were present. The Presbyterian Church, U.S., sent an observer. Presbyterians participated actively in an inter-denominational movement, known as the National Council of Churches of Christ in the U.S., that met in Cleveland, Nov. 28-Dec. 1, 1950. This National council brought together eight denominational agencies of 29 major Protestant and Eastern Orthodox communions, comprising 150,000 churches and 31 million communicant members. Its purpose was to unify the work of the different denominations at home and in the mission field. The principal Presbyterian and Reformed bodies joined in this movement for unity of action.

The various branches of the Presbyterian Church launched a movement, known as the New Life movement, to evangelize those outside of the Christian church and to awaken nominal members. Lay workers visited the unchurched peoples to win them to a positive allegiance to Christ. During the three years in which this movement had been in effect the increase in membership amounted to 658,583. There was an increase in new members over a corresponding three-year period, just prior to the New Life movement, of 194,000. There was a need for additional ministers to meet the increase in membership and population. In the autumn of 1950 the enrolment of young men in theological seminaries increased to such an



Rajendra Prasad leaving Government house, New Delhi, on Jan. 26, 1950, in the first presidential procession in India.

extent that enlarged facilities were required. The Presbyterian Church in the U.S. created a special lay committee on theological education to develop plans for raising $8 million to provide facilities for the education of young men for the ministry. (*See* also CHURCH OF SCOTLAND.) (G. S. K.)

PRESIDENTS, SOVEREIGNS AND RULERS: *see* SOVEREIGNS, PRESIDENTS AND RULERS.

PRICES. The effects, direct and indirect, of the devaluation of sterling and other currencies in Sept. 1949 were the main factors in the movements of prices, in the United Kingdom as in most European countries, in the last quarter of 1949 and the early months of 1950. Further factors began to exert an influence at least from the middle of 1950. Prices on world markets and particularly in the U.S. were falling throughout 1949. About Feb. 1950 business began to recover in the U.S., and the fall was halted. With the invasion of South Korea in June 1950 and the expansion of military production programmes the mild recovery turned into boom. Increases came first in the prices of basic materials, particularly those needed for stockpiling and defence production, but spread rapidly over a wide range of commodity prices in various markets. These effects became merged with the remaining influences of devaluation from mid-1950 onwards. Moreover the effects appeared earlier in some types of prices (*e.g.*, import prices) than in others (*e.g.*, retail prices). It is convenient to analyse British price movements in 1950 in two stages. First there is the translation of higher world prices for basic commodities into a rising level of import and wholesale prices and into a worsening of the terms of trade; secondly there is the delayed and damped reaction of retail prices to the general upward trend.

Great Britain. *Import, Export and Wholesale Prices.* The analysis in Table I is based on an article in the London and Cambridge Economic Service *Bulletin*, Nov. 1950.

TABLE I. BRITISH COMMODITY PRICES (Increase %)

	Sept 13, 1949,* to March 14 1950	March 14, 1950, to Sept. 19, 1950	Sept. 19, 1950, to Dec. 19, 1950	Total, 15 months from devaluation
Copper, electro	42	32	Nil	88
Lead, soft	2	45	6	86
Tin, cash (buyers)	5	28	61	116
Zinc, g.o.b.	35	72½	2	138
Jute, Daisee	30	—3	3½	31
Sisal, African no. 1 (spot)	35	15	27	99
Cotton, Mid-American	33	27	15½	95
Wool, tops, 64's	39	71	5	150
Rubber, R.S.S. (spot)	46	202	8	372

* Devaluation of the pound to the equivalent of United States $2·80 was announced on Sept. 18, 1949.

Though not all *basic commodity prices* in sterling were marked up following devaluation, increases were certainly not confined to materials mainly imported from dollar sources (*see* Table I); indeed, as is shown in the London and Cambridge Economic Service *Bulletin*, Aug. 1950, p.89, commodities originating in the sterling area and largely sold to the U.S. rose in price as much as dollar goods. The later price increases around the middle of 1950 were very general, though the extent was much larger for some materials (*e.g.*, rubber) than for others. Moreover the rising trend was not of short duration since, for many commodities, increases were recorded after September (when the Korean war seemed nearly over) as well as in the previous three months.

British *import prices*, measured in sterling, increased by nearly 20% after devaluation and then levelled off in the second quarter of 1950 (*see* Table II). It had been estimated that the direct effect of devaluation would be to increase prices of British imports by a little over 15% while there would be a further rise because of indirect effects. The latter were substantial; and as already noted, there was a marking-up of sterling prices of goods originating in sterling countries. The rise in import prices was resumed in the middle of 1950, though confined (at least at first) to those of materials as opposed to those of foodstuffs. From May to Nov. 1950 this resumed increase amounted to 12%.

TABLE II. IMPORT EXPORT AND WHOLESALE PRICES, UNITED KINGDOM (average 1947=100)

	1948	1949		1950			
	Average	Aug.	Nov.	Feb.	May	Aug.	Nov.
Imports and Exports							
Average values:							
total imports*	111	107½	116½	121	128	131	143
exports*	109	112	113	115	118	120	124
Terms of trade†	102	96	103	105	108½	109	115
Food and Tobacco							
Average values:							
imports*	108	105	114	116	122	123	125
Wholesale prices‡	110	123	129	131	136½	132	139
Industrial Materials							
Average values:							
imports*	118	115	122	134½	144	153	180
Wholesale prices‡	117	118	123	126	131	140	156½

* Index numbers as computed from annual data extrapolated into 1950 by use of index numbers of import or export prices (Board of Trade). † As ratio of average values index of imports to that of exports. ‡ From index numbers of Board of Trade (with base 1930), switched to 1947=100.

During these first 15 months after devaluation British *export prices* increased steadily but much more slowly, domestic costs being relatively stable. As a consequence, first of devaluation and then of boom conditions in the U.S. and elsewhere, there was a worsening in the terms of trade, amounting to some 13% between Aug. 1949 and May 1950 and to a further 6% in the second half of 1950. This was the case, to a greater or less extent, in all countries which devalued their currencies. Indeed it was one of the objects of devaluation to make imports dearer in relation to exports.

Among *wholesale prices*, those of industrial materials, including semi-manufactures, increased by 11% in the nine months after devaluation (Aug. 1949 to May 1950 in the official index number). This can be compared with the increase of 25% in prices of imported materials. The difference arose because there were practically no changes in wholesale prices of domestic materials such as coal, iron and steel or in the domestic element of other wholesale prices. Wholesale prices in general reflect in part prices of imported commodities and domestic costs and prices. Like import prices, wholesale materials prices increased again in the second half of 1950.

In 1950, as in earlier postwar years, prices of imported foods were largely determined by the Ministry of Food in their bulk-buying operations, while wholesale food prices were also affected by subsidies. From Aug. 1949 to May 1950 import prices of food and tobacco increased by 16% and wholesale prices rose by 11%. In the summer and autumn of 1950 any upward trend in food prices was hidden by seasonal declines; *e.g.*, in fruit and vegetable prices. There were, however, indications of a renewed upward movement towards the end of the year.

Retail Prices and the Cost of Living. The official interim index of retail prices paid by working-class families, commonly known as the "cost-of-living," increased by not more than 2½% in the eight months following devaluation, from Aug. 1949 to April 1950 (*see* Table III). Seasonal factors then dominated the movements of the index for some months: it rose in May, declined slightly to August and returned to the April level in September. The rise was resumed in the last quarter of the year and in November stood at a level 4% above that before devaluation. The expectation had been that the direct result of devaluation would be to raise the index by rather more than 3%, while indirect effects would raise this figure to 5% at least.

TABLE III. RETAIL PRICES, UNITED KINGDOM
(June or average 1947 = 100)

	1948	1949		1950			
	Average	Aug.	Nov.	Feb.	May	Aug.	Nov.
*Working-class Families**							
Rent and rates	99½	100	100	100	101	101	101
Services	105	105	106	106	108	108	111
Drink and tobacco	109	107½	107½	107½	104	104	104
Food	108	116	119	121	124½	121	125
Clothing	109	119	117	117	119	120	123
Other commodities	109	111	111	113	113	114	117
All items	*108*	*111*	*112*	*113*	*114*	*113*	*116*
All Consumers†							
Food	107	113	110	116	122	117	..
All items	*108*	*111*	*110*	*112*	*113*	*112½*	..

* Interim index of retail prices (Ministry of Labour) with June 1947 = 100.
† Implicit index derived from quarterly data on personal expenditure on consumers' goods and services at current and at 1948 prices, as computed by Central Statistical Office (*Monthly Digest of Statistics*); the index is switched to average 1947 = 100 and figures shown under months relate to quarters around the months named.

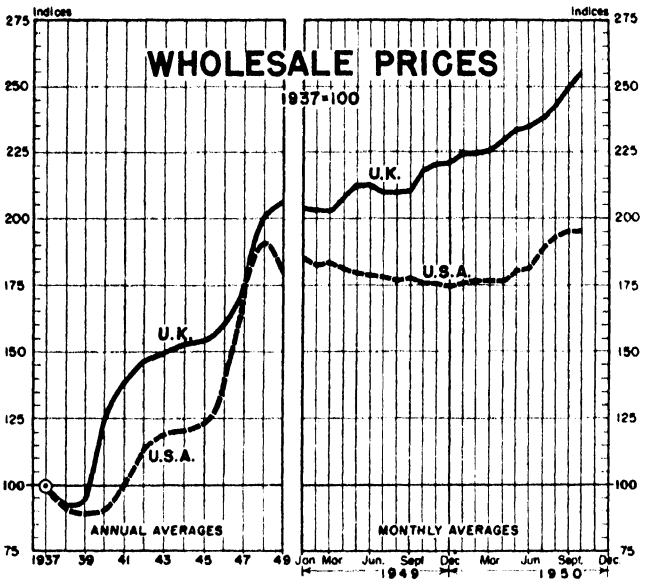
Because of the slow rise early in 1950 and the decline recorded after mid-year, the official index was subjected to widespread criticism. The index was designed to measure changes in retail prices as they affect working-class families, *not* the increased cost of a rising standard of living. Consequently the index fixes a certain standard of living; *i.e.*, it selects a particular consumption-pattern or budget and then measures price-changes by the varying cost of the fixed standard. A good deal depends on what particular standard is selected—though not as much as is sometimes supposed, as the *level* of prices may be higher for London or for middle-class families than for other families while *changes* in price may not be so very different. In its "interim" form the index takes as its standard the average working-class budget of 1937-38. Such a pattern of consumption was not appropriate to conditions of 1947 and 1948 because of rationing and general shortages of goods under price-control, and the index may not have been an adequate measure of price-increases in these years. In 1949-50, however, the supply-position being relatively easier and the actual distribution of expenditure probably nearer to the prewar pattern, the index was a better reflection of price-increases. Though a more up-to-date index was desirable, the interim index was no worse an indicator of price-changes in 1950 than in previous years.

Seasonal influences on prices operated in 1950 to a much greater extent than in any previous postwar year. There were seasonal changes in the prices of eggs, fish, fruit and vegetables, and summer prices for coal were re-introduced.

All index numbers of retail prices must take quotations of goods of fixed quality and allow for any quality changes. There is an effective rise in price if weaker beer is introduced at the same money price as stronger, a fall if stronger beer is sold at a price previously charged for weaker. In April 1950 the tax rate was so adjusted as to increase the quality of beer without a rise in money price; the net effect in the index was a lower price for beer. Other rather similar changes occurred; *e.g.*, for sausages.

Apart from these considerations, there were powerful factors delaying and cushioning the effect of rising import prices on retail prices. There were long lags between changes in materials prices and changes in retail prices of the corresponding finished products. Increases in retail prices were made for price-controlled goods generally when the goods containing the higher-priced materials were sold across the counter. Moreover all retail prices have a large domestic element; and in 1950 wage rates and purely domestic prices were very stable. Consequently higher import prices had no more than a damped effect on retail prices: indeed there was considerable pressure in 1949-50 to squeeze manufacturers' profits and distributors' margins and keep down retail prices.

The rise in the index of retail prices during 1950 can be attributed entirely to the delayed effect of devaluation. Increases in import and wholesale prices during the second half of 1950 had not, in general, worked through to retail prices by the end of the year.



Europe. Most countries in western Europe devalued their currencies with sterling in Sept. 1949 and approximately to the same extent. Subsequent movements in domestic prices were broadly similar to those in Great Britain. In Scandinavian countries and even in the Netherlands and France import prices in local currencies rose less than in Great Britain: industries in these countries did not make such demands on basic materials with prices largely determined by the U.S. market. But the general course of wholesale prices was on the British pattern: a slowly rising trend until early in 1950, followed by a general increase after the middle of the year in response to boom conditions. Retail prices generally followed those at wholesale, without such time-lags as were evident in Great Britain. Sweden was the only country in the group to succeed in maintaining a relatively stable price level, at least until the middle of 1950.

On the other hand Switzerland kept parity with the dollar in 1949 and Swiss price levels generally followed those in the U.S. Prices continued to fall, not only at the end of 1949 but also well into 1950; no marked increase occurred until after mid-1950. The same was broadly true of Italy, where prices had previously been highly variable. In Belgium devaluation of the franc in 1949 was limited, and there were no large price-movements until after the middle of 1950.

Mainly as a result of devaluation, the large exporting countries of western Europe, apart from Switzerland, found their export prices in 1950 much reduced in terms of the dollar. In the second quarter these prices were only some 75-80% of the pre-devaluation level.

Commonwealth. Australian prices continued to rise during 1949 and 1950, and devaluation of sterling only served to accentuate temporarily the upward trend. In Canada, where prices generally follow those in the U.S. closely, there was in fact no decline to parallel that in the U.S. in 1949; and prices increased from the beginning of 1950. Much less movement was evident in other Commonwealth countries than in Great Britain, at least until mid-1950. In South Africa and New Zealand, for example, devaluation seemed to have little immediate effect, and prices did not move upwards until the second quarter of 1950. It would appear that price increases in the basic imported materials were offset for some time by a stable or even decreasing level of domestic prices. (R. G. D. A.)

United States. In the United States at the beginning of 1950 there was a reversal of the downward trend of both wholesale and retail prices that had started in the summer of 1948 and had continued throughout 1949. Wholesale prices advanced 11·4% and retail prices 4·8% in the six months following the outbreak of the Korean war, however, and for the year as a whole they advanced 15·9% and 6·5% respectively. By December both the wholesale and consumers' price indices had reached record peaks. The wholesale price index was 134% greater than in Aug. 1939, and the consumers' price index 81% greater.

In Dec. 1950 wholesale prices of textile products, metals and metal products, building materials, hides and leather products, chemical and allied products, house-furnishing goods and the miscellaneous group of goods reached their peaks after World War II. Retail prices of all items as reflected by the cost-of-living indices of the Bureau of Labour Statistics, reached their postwar peak levels in December. The only components which did not attain their highest levels in that month were food, which was within 1% of the previous peak of July 1948, and apparel, which was within 3% of its previous record level of Oct. 1948.

As shown in Table IV, wholesale prices were, at the end of 1950, 134% greater than in Aug. 1939, 87% greater than in Dec. 1941, and 55% greater than at the end of price controls in June 1946. Wholesale prices rose continually during the year, except for a temporary decline in October, and were accelerating at the end of the year. The Korean crisis led to very rapid increases in prices of basic commodities required for the defence effort and the production of civilian goods. Substantial increases occurred in textile products, chemicals and allied products, hides and leather products, house furnishings and farm products.

Consumers' prices increased each month from March to the end of the year. Food prices, the most important item in the consumers' cost-of-living index, led the index down through February and then upward during the remainder of the year. House furnishing prices also increased more than the average. Rents rose slowly but steadily throughout the year, and apparel prices increased rapidly after July. By December retail prices were 81% greater than in Aug. 1939, 61% greater than in Dec. 1941 and 34% greater than in June 1946.

The relative stability of prices during the first half of the year reflected a fairly high level of employment, the continued desire of consumers to spend, a high level of industrial output and an expanding national income. The rapid increase in prices after the outbreak of the Korean war reflected both consumer and industrial hoarding and the pressure of an inflationary money and credit structure on goods in actual or expected short supply. These sudden price increases led to immediate demands by the government for voluntary action to curb inflation. The president indicated that he would seek power to control prices if voluntary controls were unsuccessful. Statutory power to control prices was granted to the president in the Defence Production act of Sept. 8, and although an office of price stabilization was created immediately reliance continued to be placed on fiscal and credit controls and on voluntary action. Control over hire purchase was imposed in September; down payments for housing were increased; and margin rates for stock purchases and reserve rates against bank deposits were also increased. Some specific price orders, notably those calling for "roll-backs" of price increases that had been announced in the car industry, were issued in December. However, the anti-inflationary controls imposed and voluntary resistance to price increases were not successful in preventing a strong general up-swing in prices. At the end of the year it was clear that stronger measures would be necessary to prevent a further increase in prices. The planning of very large expenditure for the defence programme, the high level of consumer expenditure, the volume of new private investment planned and continued expenditure for foreign aid all tended to have a disproportionately inflationary effect upon goods and services in short supply. (*See* also BUSINESS REVIEW; NATIONAL INCOME; WEALTH AND INCOME, DISTRIBUTION OF.)

(W. V. WT.)

TABLE IV. PERCENTAGE CHANGE IN WHOLESALE PRICES BY MAJOR COMMODITY GROUPS, UNITED STATES, SELECTED PERIODS, 1939-1950.

Percentage change (increases unless otherwise shown), Dec. 1950 from:

Commodity	Post-war max.	June 1950	Dec. 1949	June 1946	Aug. 1939
Farm products	—5·9	13·0	21·0	33·8	207·4
Food	—5·5	10·5	15·0	58·6	166·5
Textiles	0·0	25·0	23·7	56·8	152·5
Fuel and lighting materials	—1·5	2·2	4·0	54·4	86·8
Metals and metal products	0·0	7·4	10·1	64·6	98·2
Building materials	0·0	9·6	16·3	70·5	147·2
Hides and leather products	0·0	19·7	21·5	78·6	135·8
Chemicals and allied products	0·0	21·9	21·2	44·8	88·1
House furnishings	0·0	15·7	17·8	53·9	98·5
Miscellaneous	0·0	22·5	26·9	42·6	91·7
All commodities	0·0	11·4	15·9	55·3	133·7

TABLE V. PERCENTAGE CHANGE IN CONSUMER PRICES (COST OF LIVING) BY MAJOR COMMODITY GROUPS, UNITED STATES, SELECTED PERIODS, 1939-1950

Percentage change (increases unless otherwise shown), Dec. 1950 from:

Commodity	Post-war max.	June 1950	Dec. 1949	June 1946	Aug. 1939
Food	0·6	5·3	9·2	47·9	130·4
Apparel	—2·6	6·2	5·7	24·0	95·8
Rent	0·0	1·5	2·9	15·9	20·6
Fuel, electricity and ice	0·0	3·7	3·1	30·4	47·8
House furnishings	0·0	10·6	10·5	31·2	103·6
Miscellaneous	0·0	4·3	4·2	26·7	61·4
All items	0·0	4·8	6·5	33·8	80·9

PRINTING. The year 1950 was characterized for the printing industry by a certain restiveness in the labour force and by a shortage of essential raw materials. Paper-making material, for instance, was scarce everywhere; and since most of it had to be bought with dollars, supplies became restricted according to the strength of the currency system. The record price of tin of £1,290 a ton caused apprehension in the industry. Moreover, the high cost of rubber and, particularly, the restrictions on supplies of synthetic rubber substitute slowed developments towards increased efficiency. Nevertheless in many European countries there were exhibitions in which printing machinery and equipment were displayed and demonstrated in bids for extended markets.

A departure from the traditional arrangement of the composing frame was tried in various countries, including Great Britain, France, Germany and Switzerland, to allow the operator to sit. Scientific research institutions did good work: the P.A.T.R.A. in Britain extended its influence, developed new instruments for colour measurement and inaugurated a colour measuring service, with financial support from the industry and some government aid; the Stockholm research institute carried on without support from public funds; and in the U.S.S.R. research was applied in particular to book printing. Increased use of the "unsewn" book in which the leaves are fastened with flexible adhesive was catered-for by mechanical equipment produced in Great Britain, Germany and Switzerland. Trade barriers had the effect of encouraging the simultaneous manufacture of certain identical machines in four different countries, just as machines which had previously been manufactured exclusively in Eastern Germany were now made in Western Germany also.

Great Britain. An important change in outdoor advertising poster effects was achieved by the adoption of fluorescent inks: five different colours were made available exclusively for silkscreen printing, and a remarkable brilliance was achieved (the mechanization of the silkscreen process made rapid strides, and improved techniques in stencil production increased the range of effects). The photolitho process produced a complete printing of the *Encyclopædia Britannica*. The British Industries fair demonstrated the scope of materials and machinery available, largely for export. The British Federation of Master Printers celebrated its jubilee. A letterpress productivity team visited the U.S. to investigate production methods.

Labour difficulties however continued, culminating in a six-week stoppage of work in London that arose from a dispute with the London Society of Compositors.

Europe. *Denmark.* The excellence of colour reproduction in periodicals was further demonstrated when a new British high-speed offset machine was put to work in conjunction with bimetal printing plates; and the "Hadego" machine for photographic display type was made available for wider industrial application. But a serious shortage of skilled printing labour remained, through the objection of trade unions to permitting adequate recruitment.

France. With the background of political uncertainty, wages became lower in real value while taxation remained high. The number of registered publishers increased remarkably, and a "court" was established to ensure truth in all matters relating to advertising and sales promotion. At a paper and printing exhibition held in Paris, exhibits were shown from the U.S. and eight European countries in addition to those of France.

Germany. The end of the paper-licensing system gave rise to a natural tendency to re-establish long-lapsed local newspapers; and paper supplies were soon exhausted, so that many small and some larger newspapers collapsed. Factories for printing and paper-processing machinery were re-established and enlarged. Standard types of machines were brought to greater refinement, running speeds increased and higher standards of safety and operational convenience adopted. Machinery was shown at many exhibitions in Germany (not all of them equally successful) and abroad. Strong bids were made for export markets, with some success.

The death was announced of Karl Klingspor, head of the Klingspor type foundries at Offenbach, a man who influenced typography far beyond his native country.

Italy. There were important increases in the manufacture of machinery for the printing and processing of paper, and persistent efforts were made to supply export markets. At the trade fairs at Rome and Milan competitors from Great Britain, Germany and the U.S. exhibited. Steps were taken to install photographic typesetting for book production by lithography.

Sweden. For the first time Sweden produced composing-machine matrices in an endeavour to reduce her dependence on imports. Continued engineering concentration resulted in the export of high-grade two-revolution letterpress machines. Extended use was made of the four-colour litho offset machine; and two daily newspapers, with British-made machines, used full colour reproduction. Lightmeters were developed which measured the amount of light so as to obviate the uncertainties of time exposure.

Switzerland. Continued interest was shown in high-class design for books, magazines, posters and general printing. Precision engineering retained its important place, with an extension of manufacturing interests to U.S., Great Britain and France. A letterpress productivity team went to France to study industrial methods, particularly the precision methods practised by M. V. Letouzey. (A. Kk.)

United States. An important development in printing plate making during 1950 was Time, Inc.'s colour scanning machine (developed jointly by Eastman Kodak company and *Time*) for making colour-corrected, continuous-tone three-colour and black separation negatives automatically from colour transparent copy. Electronics, optics and photography were employed. The colour scanner was a lathelike machine with a shaft extending from end to end. At the right end was mounted a transparent drum upon which was fastened the colour transparency. On the same shaft at the left side four sheets of sensitized photographic film were mounted side by side, one each for yellow, red, blue and black separation negatives, in that order. A spot of light projected from a lamp scanned the colour transparency wrapped on the transparent drum at the right of the rotating shaft. The light spot beamed a varying colour pattern by mirror through three filters, which separated the colour values and by means of photo-electric cells passed them on to the electronic and amplifying panels. In turn, the colour values (varying currents) were sent to the four lamps which exposed the four revolving sensitized negatives on the drums mounted at the left on the shaft. It was claimed that the scanning operation required 1 hr. 5 min. for an 8 in. by 10 in. colour transparency at 250 lines to the inch.

Another notable development of 1950 was the Koloroid colour proofing process—a method of making full colour, ink pigment colour pre-proofs from separation screen or continuous-tone negatives. The plate-making colour photographer thus could see a proof of his colour separation negatives in full ink colours and could do colour masking and check results before the retoucher or etcher received the negatives. A two-magazine Teletypesetter-operated highspeed line-composing machine was announced by the Mergenthaler Linotype company. The machine could be operated at 12 lines per minute automatically on 8 pt. 12-pica slug, with or without automatic quadding. The machine was simplified and redesigned for the accelerated movement of machine parts. Mergenthaler also exhibited and demonstrated a prototype model of a two-magazine, 42-pica photographic line-composing machine at the Chicago National Graphic Arts exposition in September. All enlargements or reductions (from 6 pt. to 36 pt.) were made from 12-pt. letter characters. The manufacturer stated that by a simple arrangement of focusing stops undistorted magnification or reduction of type was possible.

Development of a high speed web printing press utilizing the principles from three printing processes, gravure, offset and letterpress, was announced by Crawford Engineering, Inc. The press printed offset-gravure for one-colour, colour and colour process work, and by letterpress with rubber plates with a single (gravure) ink distribution system. The press, which printed wrappers, labels, insurance policies, packaging products and so on was arranged in units; as many colours as there were press units might be printed. By combining two or more press units, it was possible to combine printing by two processes in a single run. (M. St.)

PRISONERS OF WAR. Large-scale military operations in Korea during 1950 centred interest on prisoners of war. At the outbreak of hostilities, the International Committee of the Red Cross offered its services as a neutral intermediary for prisoners of war to all of the belligerents. Both the Republic of Korea and the Democratic People's Republic of Korea agreed to recognize the provisions of the Prisoner of War Convention of Geneva, which neither had signed, and the unified command of the United Nations announced that the provisions of the convention would be observed by all armies under its control. Representatives of the International Committee of the Red Cross were



North Korean prisoners at Pusan in the first prisoner of war camp opened by the United Nations command.

accepted in southern Korea but were not able to obtain visas for northern Korea. Exchanges of lists of prisoners, however, were effected.

A Tass agency report, broadcast from Moscow on May 4, stated categorically that all German prisoners of war had been released from the U.S.S.R. The following day Konrad Adenauer, chancellor of Western Germany, declared in the Bundestag that about 1,500,000 German prisoners of war in Russia were still unaccounted for. Lord Henderson said in the House of Lords on May 23 that the Soviet statement was not and could not be accepted as true.

On several occasions during 1950, the governments of France, Great Britain and the United States requested an accounting from the government of the U.S.S.R. for prisoners of war still believed to be held by the U.S.S.R. In each instance, the U.S.S.R. replied that all prisoners of war except those accused of crimes had been repatriated.

On April 22, a Tass agency statement alleged that the repatriation of the remaining Japanese prisoners of war was completed. On May 10, William Sebald, the U.S. member of the Allied Council for Japan, said that 370,000 Japanese prisoners of war in Russia were unaccounted for.

Three Italian generals, 10 officers and 32 other ranks arrived at Tarvisio from Russia on May 17, five years after the end of war in Europe. From the Italian expeditionary corps of about 100,000, so far about 12,000 had returned as prisoners of war.

All World War II prisoners of war held by other countries had been repatriated or released as civilian workers except those held for crimes. (H. W. DG.; X.)

PRISONS. Great Britain. In England and Wales the daily average population of prisons and Borstals rose towards 21,000. Overcrowding continued, no further expansion into open prisons being possible. The main preoccupation was the setting up of the new corrective training system. By the end of 1950 over 2,000 men and nearly 100 women received this sentence, which must be served either in regional training prisons, by persons suitable for the regime of these prisons, or in prisons or parts of prisons set aside for this purpose. Since a small minority of prisoners so sentenced were suitable for regional prisons, secure accommodation suitable for constructive training on the lines followed in regional prisons had to be found elsewhere for over 1,700 men. This was done, and towards the end of the year all men and women sentenced to corrective training were receiving it, in full accordance with the rules and without undue delay. All men passed through an allocation centre at Reading, where study of their records and dispositions decided whether they should go to open or closed regional prisons or to corrective training prisons.

By the end of the year nearly 500 men were also sentenced to preventive detention. As they began to pass from the first stage in local prisons to the second stage in the central prison at Parkhurst, the pressure on central prison accommodation made it necessary to raise from more than three years to more than four years the qualifying sentence for an ordinary-class prisoner to go to a central prison. To meet this pressure on secure accommodation, two cellular Borstals became corrective training prisons and three new Borstals were opened, two in open camps and one in the former prison, now under reconstruction, at Hull. Approval was received for the initiation of a substantial new building programme. Sites were sought and plans drawn, but it would be some years before the effect of this would be felt.

The secretary of state having given the prison commissioners responsibility for the provision and management of detention centres and remand centres for young persons under 21 as provided by the Criminal Justice act, 1948, preparatory work was undertaken, and plans were under consideration for opening two or three pilot detention centres in adapted premises. Remand centres, it was thought, would require new buildings designed for the purpose.

There were no significant changes in the methods of the ordinary prison system. All categories of prisoners were provided with new cell-cards, completely revised in the light of the new rules and modern developments, giving full information as to their rights and obligations and such other matters as they ought to know. The system of reception boards, for the better classification of prisoners and their allocation to the most suitable forms of training, was developed and improved. Experiments continued to improve arrangements for visits by prisoners' friends. The statistical results of the system continued to be satisfactory. Of those who from 1930 to 1946 came to prison for the first time for finger-printable offences, the percentage of re-conviction at the end of 1948 was 22·5% for all prisons. For discharges from regional prisons, over a shorter period but covering recidivists as well as first-timers, the re-conviction rate was under 10%.

There was no significant changes in Borstal numbers, methods, or statistical results.

In Scotland the population declined slightly. Developments were mainly directed towards vocational training and, in Borstals, to better classification leading to smaller groups and more individual attention. Those provisions of the Criminal Justice (Scotland) act, 1949, brought into force as from June, 1950, did not include corrective training and preventive detention. (L. W. F.)

United States. Penal construction programmes lagged during 1950 because of rising costs of labour and materials. However, in Massachusetts, ground was broken for a new state prison near Norfolk to replace the century-old Charleston prison, which had long been condemned. Illinois opened a special reformatory at Sheridan for youths up to the age of 17 who were convicted of felonies.

In some states educational facilities were enlarged and more attention was paid to libraries and to incentives to win academic recognition. A few prisons hired trained librarians. The interest of laymen in the problems of prisoners was increasing. In Elmira, N.Y., the American Association of University Women provided funds to allow reformatory inmates to pursue advanced studies by following correspondences courses or by obtaining the necessary technical books.

In Michigan and other states, selected groups of businessmen were taken on all-day visits through penal institutions.

Through a grant of funds by the New York foundation, New Jersey started a new short-term treatment for youthful offenders. Under the New Jersey plan certain selected youths were placed on probation provided they agreed to go for treatment to a special home known as Highfields, where there were no guards or custodial officials. The youths, limited to about 20, remained at this home for about four or five months. At the home, treatment was centred around, although not limited to, the technique of guided group interaction which was developed in New Jersey reformatories after 1948 and which had achieved outstanding success. A research study of the treatment was being made in 1950 under separate auspices out of funds provided by the Vincent Astor foundation.

(S. A. L.)

PSYCHIATRY. The treatment of severe forms of mental disease, particularly the more serious type of psychoses such as schizophrenia, by physical methods, as opposed to psychotherapy, continued unabated in 1950. Electroshock therapy was widely used. Surgical intervention by intra-cranial operations and by extra-cranial methods found advocates in increasing numbers throughout the world, and intravenous drug medication became generally accepted. Ugo Cerletti, the pioneer in electroshock, who had invented the term 12 years earlier after its first use on man, made a prolonged investigation into the mechanism of the therapeutic action of electroshock. Not satisfied that the convulsion itself would account for the improvement in mental patients he sought some changes in the blood or tissues from previously shocked patients. He found in the brain a substance which he called acroagonine and noted salutary changes of behaviour in patients following the injection of suspensions of cerebral material containing acroagonines.

The most striking changes occurred in the field of the neuro-vegetative functions of sleep, vasomotor stability, perspiration, general nutritional condition and, of more importance, in affect and in the state of anxiety. Cerletti also found that the peculiar properties of shocked brain suspensions in water tended to grow fainter with the passage of time and disappeared altogether in about two months. Cerletti's work on acroagonine had not yet been confirmed, but evidence has been presented which strongly suggested that there was a humoral factor in the mechanism of improvement following electroshock.

These studies and others led to the repetition of electroshock treatment many times a day for certain patients, a method which came to be referred to as "annihilation." Frequently treatment was given in "clusters" of daily shocks for three or four days, followed by a three-day rest. This form of therapy, less intense than the annihilation method, was often effectual in patients with minor forms of psychosis. Leo Alexander and others developed an even less violent form in their non-convulsive electric stimulation therapy, particularly adapted to the effective disorders, with anxiety and depression as the chief symptoms. Alexander obtained his best results by using both convulsive and non-convulsive stimulation in the same patient. Convulsive treatment relieved depression but reduced awareness for memory content. In some cases he found that anxiety was enhanced, rather than reduced. On the other hand, non-convulsive treatment relieved anxiety and restored awareness for memory content, but sometimes brought on a depression. The use of the two methods was most efficient in reducing the number of untreatable conditions left after electroshock treatment. The variation in response again emphasized the need for meticulous evaluation of the patient's condition before and after electroshock. This form of treatment was still in the experimental stage, although confidence was being established in its effectiveness when carefully used under controlled surroundings. Machines for giving electroshock were highly efficient, but there were not enough trained personnel to administer this violent form of therapy.

Pre-frontal lobotomy, developed by Egas Moniz (see *Britannica Book of the Year 1950*) in 1936 for the treatment of psychoses by cutting the nervous connections between the frontal lobes and the remainder of the brain, continued to be used throughout the world as the chief surgical method of combating mental disease. The technique of the operation underwent modification. Selective partial ablation of the frontal cortex, or topectomy, replaced in many clinics the "blind surgery" methods of a few years earlier. An evaluation of the results of focal surgery could be made only at some future date, but there were some indications that progress was being made. Gross obsessive-phobic symptoms were often relieved, but paranoid trends sometimes resulted, thus nullifying the good results in overcoming anxiety and compulsive behaviour.

Trans-orbital lobotomy, first used in Italy by A. M. Fiamberti in 1937 and revised by Walter Freeman in the U.S. in 1948, opened up a new field in psychosurgery. The operation, done by driving a suitable instrument into the brain, the entry being through the orbital plate, was reported to be both simple and safe. The patient was first given electroshock to the point of deep coma. Many hundreds of patients had been treated, particularly in institutions, without fatalities or complications.

Further investigations in the drug treatment of mental illnesses were reported in 1950. The studies on the metabolism of nerve cells by H. Hydén in Sweden in 1947 led to the use of malononitrile in man in an attempt to effect the psychic functions in disorders of the mind. The 1950 report by Hans Hartelius of Stockholm would indicate that this simple therapeutic procedure had considerable value. It may be used in cases where electroshock is contra-indicated. The number of patients who had been treated was too small, however, to have statistical significance. Hartelius believed that there were sufficient grounds to warrant a testing of the method on a larger scale.

Insulin shock treatment, with its resulting hypoglycemic state, continued to be widely used. Manfred Sakel, who had introduced the method 22 years earlier, reported that insulin should be considered a specifically vagotonic medication or hormone. Insulin appears to effect the basic pathogenic processes in a more profound way than electroshock. Improvement after its use was noted in a large variety of psychoses. Sakel felt that insulin coma gave the best and most lasting results in schizophrenia, although a favourable response also occurred in cyclothymia, involutional melancholias and depressive states. He made a strong plea for insulin therapy, but the final evaluation of this method could be considered as reached.

Acetylcholine shock, carbon dioxide treatment, the production of anoxia and even asphyxia as forms of treatment received recognition in 1950. (*See* also MENTAL DISEASES; PSYCHOLOGY.)

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(H. R. V.)

PSYCHOLOGY. During 1950 numerous contributions were made to social psychology and to individual psychology and to the field between these and psychopathology. In social psychology attention was increasingly centred on the group as the unit of analysis. There was a marked revival of interest in the various problems first systematically formulated by William McDougall in his *Group Mind;* and McDougall's insistence on the " study of the dynamic trends of the individual as the essential basis of social psychology " was discernible in the many attempts to investigate what K. Lewin has called " group dynamics." Some of the most suggestive results were obtained by the application of experimental methods to the reactions of small groups and to the behaviour of individuals in a group setting. Increasing attention was also paid to the psychology of social classes, particularly in relation to the incidence of delinquency after World War II and to the formation of opinions, motives and social attitudes. An important volume, published on behalf of the United Nations association and containing contributions by G. W. Allport and other British and American psychologists, attempted a comprehensive survey of *The Psychological Factors of Peace and War.*

The importance of social and cultural factors was repeatedly stressed in many different fields of work. Several investigators produced evidence to show that many emotional disturbances commonly described by medical writers as " mental illnesses " were, more often than not, the outcome of an interaction between the individual and his social environment, and therefore to be regarded as normal reactions to an abnormal or incongruous situation. Many writers (*e.g.*, O. H. Mowrer, F. J. Shaw and E. J. Shoben) accordingly argued that the appropriate treatment for such reactions should be educational rather than medical; *i.e.*, should consist in an unlearning of undesirable habits followed by a re-learning of socially acceptable habits.

In the field of individual psychology interest was directed less to the study of methods and more to the interpretation of results. Sir Cyril Burt, relying largely on his method of subdivided group-factors, showed how the results of factorial studies confirmed the theory of a hierarchial structure of the mind. C. Spearman and Ll. Wynn Jones, on the other hand, maintained that Spearman's original two-factor theory " still held the key to the situation "; but in their re-statement of the two-factor scheme so many modifications were introduced that it was (as they tacitly admitted) scarcely distinguishable from the general-plus-group factor theory (*i.e.*, the so-called three-factor theory) put forward by Burt. P. E. Vernon, in a review incorporating the latest results obtained from army data, also supported a hierarchical theory of general and subdivided group-factors but agreed that mental structure must be far more complex than the simplified factorial schemes might suggest. Amya Sen's attempt to evaluate the Rorschach test by an analysis of content instead of by the orthodox Rorschach procedure aroused considerable interest; on the whole, however, work on temperamental testing was increasingly critical. Two attempts to evaluate the perceptual and other tests put forward by H. J. Eysenck as a means of discriminating neurotic from normal personalities furnished results that were almost entirely negative; other articles insisted on the low reliability and validity of the more popular projective techniques.

In the field of general psychology several minor researches were published, based on the use of the newer electrical devices, particularly for the study of vision, hearing and the activity of the cortex. Another subject to which attention was largely devoted was the study of learning by improved experimental techniques, particularly among animals; in the main, the advocates of stimulus-response hypotheses seemed able to devise the best experimental techniques, whereas the advocates of a field-theory seemed to gain increasing support from the actual results. (C. L. B.)

United States. John C. Flanagan and a number of others at the American Institute for Research extended the use of the critical incident technique to a variety of psychological problems during 1950. The critical incident is a report by a competent observer of something a person did on a job which was outstandingly effective or ineffective in getting the job done. The systematic collection of such incidents provides the basis for establishing the critical requirements for that job. The critical incident technique is thus a specialized type of job analysis which emphasizes factual reports of observations of behaviour that are crucial to successful work performance. Flanagan and his colleagues studied 3,347 critical incidents. As a result of their systematic classification, the following eight major areas of a scientist's work, critical for his success or failure, were distinguished: (1) formulating problems and hypotheses; (2) planning and designing the investigation; (3) conducting the investigation; (4) interpreting research results; (5) preparing reports; (6) administering research projects; (7) accepting organizational responsibility; (8) accepting personal responsibility. A check list for appraising effectiveness of research workers and a selection procedure for predicting research ability in the physical sciences were then constructed. Both covered the eight areas originally identified by classification of actual critical incidents.

Harold Gulliksen, in his *Theory of Mental Tests*, brought together the hitherto widely scattered material on the theory and statistical methods fundamental in the construction of good psychological tests. Gulliksen also added a number of his own contributions, for example a discussion on the logic of item analysis, the purposes to be served by item analysis and prospective developments in item-analysis techniques.

John L. Kennedy and a group of collaborators at Tufts college, Medford, Massachusetts, produced the first systematic handbook in the rapidly expanding field of human engineering. Engineers and physical scientists had invented such complex machines and systems of machines that the limits of efficiency are set by the human operator rather than by the machine. The *Handbook of Human Engineering Data for Design Engineers* was written to help the engineer to increase accuracy and efficiency by " tailoring " his machines to human capacities. It brought together information on measurements of the human body, vision, hearing, skin sensitivity and proprioception, motor skill, intelligence and the physiological conditions which affect efficiency.

Samuel A. Stouffer and his colleagues completed the " Studies in Social Psychology in World War II " series with the publication of volume 4 (Samuel A. Stouffer, Louis Guttman, Edward A. Suchman, Paul F. Lazarsfeld, Shirley A. Star and John A. Clausen, *Measurement and Prediction*, Princeton, New Jersey, 1950).

The more radical departure from earlier work, according to Stouffer, was represented by Guttman's thinking concerning scalable attitude areas. An attitude area is considered scalable if it is possible to arrange the items of a test or questionnaire in an order in which all persons answering a question favourably have higher ranks than do persons who answer the same question unfavourably. (*See* also PSYCHIATRY.) (H. M. W.)

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PUBLISHING: *see* BOOK PUBLISHING.

PULP: *see* PAPER AND PULP INDUSTRY.

PUERTO RICO. U.S. insular dependency in the West Indies. Area: 3,435 sq.mi. Pop.: (1940 census) 1,869,255; (April 1, 1950 census) 2,210,703. Three-quarters of the population are white. Languages: Spanish and English. Religion: predominantly Roman Catholic. Chief towns (pop., 1950 census): San Juan, (cap., 223,949); Río Piedras (132,369); Ponce (99,190). Governor, Luis Muñoz Marín.

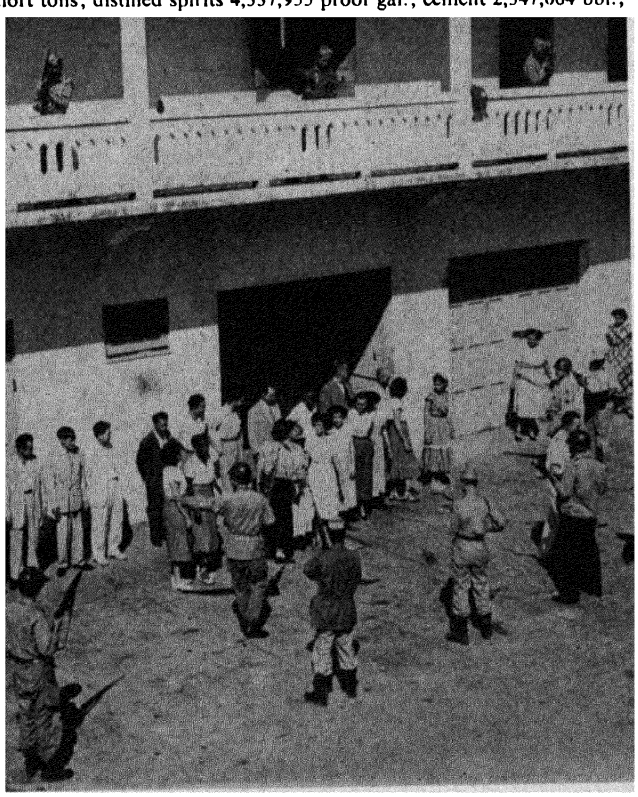
History. On July 3, 1950, the president of the United States approved an act recognizing the right of the people of Puerto Rico to organize a government conforming to a constitution of their own adoption. In the procedure established by this act, the people, through a referendum, would honour or reject this law. If accepted, a general election would be held to choose the assembly which would frame the constitution. A further election would be held to approve or reject the proposed constitution.

On Oct. 30, members of the Nationalist party started a series of disturbances throughout the island for political reasons. Armed clashes with the police occurred, but in no way did these disorders resemble an armed revolution. A group of Nationalists made an unsuccessful attack on the official residence of the governor in an attempt to assassinate Muñoz Marín. The island's police and the Puerto Rico national guard quickly brought the situation under control. As part of this same movement, two Nationalists made an attempt on President Harry S. Truman's life. The Nationalist party comprised a small minority of the population and stood for political independence from the United States at any cost. Unable to get its ideas through by a democratic process it resorted to force.

Education. Schools (1950): state and private, total enrolment, 444,723. State schools enrolment: elementary 317,158, secondary 90,970, vocational 1,555, evening 12,445. Higher education was carried on by the University of Puerto Rico, the Polytechnic Institute of Puerto Rico, the College of the Sacred Heart, and Santa Maria university.

Agriculture. During the year 10,614,633 short tons of sugar cane were harvested. The coffee crop was estimated at 199,000 cwt.

Manufacture. Main products (1950): sugar, raw value 1,293,947 short tons; distilled spirits 4,337,955 proof gal.; cement 2,347,064 bbl.; cigars 64,648,000; blackstrap molasses 49·5 million gal.; electric power generated 539·4 million kwh.



Suspected Communists being lined up for questioning in San Juan, Puerto Rico, following the uprising in Oct.-Nov. 1950.

Foreign Trade. (Million U.S. dollars, 1949) import 333·7 (92·6% from the U.S.); export 222·4 (96·2% to the U.S.).

Transport and Communications. Railways (1949): 614 km. Roads (1950): 3,560 km. Motor vehicles registered (1950): 60,727. Telephones (June 30, 1950): 34,509.

Finance. Budget (1949-50 actual): revenue $218,626,004; expenditure $203,654,358. (J. L.-Ee.)

QATAR: *see* ARABIA.

RACKETS. D. S. Milford, who became world's champion in 1937 and had so often been British amateur singles champion between 1930 and 1938, again won this championship, beating G. H. G. Doggart 3—0 in the final. J. H. Pawle, the holder, did not defend owing to an injury to his right arm. In the British amateur doubles championship D. S. Milford and J. R. Thompson reversed the 1949 result and defeated R. A. A. Holt and A. R. Taylor 4—3.

Cambridge won the university match 3—0. In the singles G. W. T. Atkins beat W. J. Collins 3—1; G. H. G. Doggart beat C. B. Haycroft 3—0 and in the doubles Doggart and Atkins beat Collins and Haycroft 4—2. Winchester (M. R. Coulman and A. D. Myrtle) again won the public schools championship beating Harrow (R. L. O. Bridgeman and R. J. McAlpine) 4—2. In the Noel-Bruce cup the old Rugbeians (D. S. Milford and P. Kershaw), the holders, beat the old Harrovians (J. H. Pawle and R. A. A. Holt) 4—2.

Captain A. R. Taylor won the army singles championship for the fifth year in succession and Captain W. R. H. Brooks achieved victory again for the Grenadier Guards. (Ae.)

RADIO, SCIENTIFIC DEVELOPMENTS IN. *Radio Wave Propagation.* It had long been appreciated that for the maintenance of communication and radio-navigation services it was necessary to understand in great detail the manner in which radio waves are transmitted between sending and receiving stations, either or both of which may be on land, on sea or in the air. It is natural therefore to find that research on wave propagation continued in 1950 to play a large part in the scientific development of radio. Since the subject needed close co-operation between research workers in different countries, it was prominent in the programme of the International Radio Scientific union (U.R.S.I.) which held its ninth general assembly in Zürich in September.

The results of some important investigations into the propagation of radio waves over the surface of the earth were published during the year. It was shown experimentally that when the waves travel across a coastline from land to sea there is at first an appreciable increase in the field strength although the distance from the sending station is steadily increasing. This effect, which was demonstrated on both a medium and a short wavelength, is naturally followed in due course by a resumption of the usual decrease of signal strength with increase of distance. This phenomenon was also explained theoretically; it is caused by the difference in electrical properties of land and sea-water. This clarification of a particular case resulted in a better understanding of the general mode of propagation of waves along the ground, which was so important in the field of medium-wave broadcasting. This work was also important at low frequencies in connection with the development of certain types of radio navigational aids, where a precise knowledge is required of the speed with which the waves travel over the ground. In this connection it is of interest to point out that a new value for the velocity of light—299,792 km./sec. *in vacuo*—was determined in 1950 by a radio method; this was some 16 km./sec. greater than the optical value previously accepted.

At the shorter wavelengths or higher frequencies the

propagation of radio waves is affected to a considerable extent by the refractive index of the atmosphere, which in turn is dependent upon meteorological conditions, and in particular on the vertical gradient of temperature and humidity in the troposphere. The first results were published in 1950 of a comprehensive investigation, conducted by British workers in New Zealand a few years earlier, in which the propagation of 10-cm. waves, travelling overland and out to sea, was compared with the meteorological conditions measured simultaneously over the same path. Further study of the many observations was expected to give a better understanding of the manner in which such centimetre waves could travel to distances well beyond the normal optical horizon. Similar investigations were carried out in Great Britain on waves in the metre-wave band assigned for broadcasting and television purposes, since it was very important in the planning of such services to know the effective range of these waves under both normal and abnormal atmospheric conditions.

In view of the extensive use and development of radio communication over distances varying from a few hundred to many thousands of miles, it was necessary to continue the study of the characteristics of the ionosphere in all parts of the world. Investigations conducted in Great Britain and Australia showed that portions of the ionosphere were subjected to both horizontal and vertical movements, which in turn produced fluctuations in the characteristics of the radio waves reaching a receiving station. These ionospheric disturbances were observed at heights in the F region of between 200 and 300 km. above the earth. They were of a quasi-periodic nature, and they might travel distances of from 500 to 900 km. with an effective speed of some 400 km./hr. The effects observed were interpreted as caused by ionized clouds in a moving mass of air, the changes in height being produced by the action of the earth's magnetic field on the ionization. There were seasonal variations in the direction of movement, which suggested that the disturbances might be associated with some large-scale changes in the upper atmosphere. These results were of interest to the meteorologist as well as to the radio scientist.

Broadcasting and Television. One of the principal events in broadcasting in Europe was the extensive rearrangement in March 1950 of the frequencies used by broadcasting stations in accordance with the allocations drawn up at the Copenhagen conference in 1948. Some 26 national delegates were signatories to the new plan, which was designed to establish better reception in Europe generally; the countries which these delegates represented conformed to the new frequency allocations, which provided for 15 channels in the long-wave band (150 to 285 kc./sec.) and 121 channels in the short-wave band (525 to 1,605 kc./sec.). Over 300 transmitters were involved in the frequency alterations, and the calibration of these was facilitated by the use of the British Broadcasting corporation's long-wave station at Droitwich, Worcestershire, which had for many years been maintained to a high degree of precision on its assigned frequency of 200 kc./sec.

The B.B.C. made rapid progress in its scheme of providing five main and five satellite television stations designed to serve most of the population of Great Britain. The Birmingham station, which was in 1950 the most powerful television transmitter in the world, successfully completed its first year's operation, with only a few minor technical difficulties. The effective range of the station was considerably greater than had been anticipated. The radio link that was ordinarily used for conveying programmes between London and Birmingham in either direction was supplemented by a co-axial cable link installed by the G.P.O.; valuable experience was expected to be gained on the relative merits of these two systems of interconnecting television stations.

With the increased demand for them, the performance of television receivers was appreciably improved, and there was much controversy about the relative merits of those using direct-viewing tubes of large diameter and projection types. For home viewing purposes, the tendency was to use large tubes up to 18 in. in diameter, but several excellent demonstrations were given of the possibilities of projection from a 2½ in. tube to give pictures ranging from 4 ft. by 3 ft. to 20 ft. by 16 ft., the latter being suitable for use in cinemas.

Miscellaneous. In addition to its application to television, and later for frequency-modulated broadcasting, portions of the metre-wave band of very high frequencies (30 to 300 Mc./sec.) were under development for mobile systems of radio telephony. There were several problems involved in the planning of such systems to provide communication between a fixed headquarters station and several mobile ones that might be police cars or taxicabs on land, or harbour and river vessels afloat. A very-high-frequency pack set was introduced for the use of broadcasting commentators. It is of interest to refer to some anniversary celebrations that occurred in 1950. The first, held at the Institution of Electrical Engineers, London, recalled the fact that Oliver Heaviside was born one hundred years ago, and reviewed the outstanding contributions he made to many branches of physics, including the conception of an ionized layer in the upper atmosphere which would guide radio waves round the curvature of the earth. A special exhibition was opened at the Science museum, London, to celebrate the laying of the first submarine telegraph cable between England and France in Aug. 1850. On the anniversary day, the B.B.C. relayed the corresponding celebrations in Calais to the London television transmitter by a series of radio and cable links. The programme was very successful and showed the possibilities of extending such outside broadcast facilities to the continent of Europe. It was fifty years since a company was formed with offices in London and Brussels for the purpose of developing, for the safety and convenience of all those at sea, wireless communication as demonstrated by Marconi in England during the closing years of the 19th century.

(R. L. S.-R.)

RADIOLOGY: *see* X-RAY AND RADIOLOGY.

RAILWAYS. The most striking features of railway events in 1950 were in the international rather than the national sphere and in the managerial rather than the technical aspect. The year witnessed the 15th meeting of the International Railway congress at Rome in October; in the same month the seventh Pan-American Railway congress assembled at Mexico City. At Berne in November the International Union of Railways at its board of management meeting ratified the accord between the union and other non-governmental railway organizations such as the R.I.V. Regolomento Internazionale Vehicole) and another link was forged thereby in the integration of organizations dealing with international railway traffic in Europe.

The year proved a landmark in the history of international railway transport not only in Europe and the eastern hemisphere but also in the western hemisphere owing to the important part taken by the U.S. government and by the Association of American Railroads in the work of the Pan-American congress, the next meeting of which was to take place in Washington, D.C., in 1953. At Johannesburg in October the Central and South African Transport congress was held. Over 100 delegates from South Africa, the Rhodesias, the United Kingdom, France, Portugal and Belgium met to discuss plans for the integration of, and improvements to, the railway systems of their respective territories in Africa with particular attention to improving outlets for Rhodesian



A 2,500-h.p. gas turbine locomotive, made in Switzerland, which was used in Great Britain in 1950. The above photograph shows the locomotive (No. 18,000) on a trial run from Paddington to Swindon, Wiltshire, on May 11, 1950.

traffic *via* Beira or other routes. Construction of new mileage was envisaged to relieve the Mafeking-Bulawayo line between Rhodesia and South Africa which had reached the limit of its capacity.

Attention might also be directed to two further examples of railway co-operation in the international sphere: first, the formation after lengthy negotiations of Interfrigo, a joint organization of European railways to develop refrigerator car services, and secondly, the greater use made of containers. These latter were boxes capable of transfer by crane or on rollers to and from rail and highway vehicles, or to and from ships, thereby saving the labour costs of transferring the load itself, making for economy in packing and helping to reduce claims for loss or damage. Another version of this practice was the use of pallets, small platforms on which goods were stacked and which were capable of being lifted by, for example, fork lifters. Widely known as palletization, this method had been developed extensively in the U.S.

Two other general tendencies became crystallized in 1950, that of railways in continental Europe to extend electric traction in place of steam, and that of railways in Canada and Australia to turn to diesel-electric traction, also in place of steam. This trend towards electric traction in western Europe was in strong contrast to the position in the U.S. where virtually all new orders for railway tractive power in the previous few years had been for diesel-electrics: this difference was explained by the availability of oil in the U.S. and its comparative lack in western Europe where, however, hydro-electric resources were being rapidly extended. Britain with its coal resources, adhered to steam locomotives for all but switching work and experimental designs, and the Western German proposals for wholesale electrification in certain areas had not yet been translated into actual construction.

The disadvantages of electric traction primarily centred on the heavy capital cost of installation per mile and the reliance on a central source of power. The diesel on the other hand was high in first cost but was a power unit of itself and could be transferred between different areas at will, while its potential mileage was as great as an electric tractor. The steam locomotive benefited from its low first cost, its versatility and mobility, and its capacity for a wide range of service given a reasonable quality of fuel.

The third noticeable feature of 1950 was that railways were unprofitable as an industry, particularly the nationalized systems which were nearly universal except in the U.S. and, but for the Canadian Pacific railway, in Canada. Many nationally owned railway systems in 1950 were not even earning their operating costs and few were covering these and interest charges on their capital. In Britain the financial deficit after fixed charges of the British Transport commission, which derived most of its revenue from British railways, totalled over £20 million in 1949 and was expected to amount to some £15 million in 1950 whilst the deficit of the French national railways in 1950 was estimated at some £90 million. By one means or another the Belgian, Norwegian, Swiss and other governments had had to make good from national funds the financial losses incurred by their nationally owned and operated railways. In contrast the American railway situation, though far from satisfactory, presented a bright picture in that the railways of the U.S. were not in 1950 a charge upon the taxpayer or the federal budget.

Great Britain. Several large-scale schemes of new works, designed and begun by the former four main-line railways, were completed in 1950. Of special note was the great marine station at Southampton docks costing about £750,000 which replaced a pier destroyed during World War II and was unique in passenger landing facilities. Primarily designed to handle expeditiously transatlantic passengers of the two Cunarders, the " Queen Mary " and the " Queen Elizabeth," it was opened by Clement Attlee, the prime minister, in August. The mechanization of the southbound classification yard at Toton, Nottinghamshire, mainly dealing with coal traffic, was completed in October after several years' work. On the Southern region colour-light signalling was completed between London Bridge and Norwood Junction, part of a much larger project. Permanent repairs were effected to the Berwick-Dunbar main-line to Scotland on which a flood had washed away seven bridges.

Passenger train speeds had not reached the prewar level

and the summer passenger services totalled about 80% of the 1939 daily mileage. New standard steam locomotive types were not to appear until 1951, but tests were conducted with various new diesel-electric units and with a gas-turbine locomotive imported from Switzerland. Restriction on capital expenditure under government instruction retarded many new works schemes and limited the volume of renewals of track, buildings and equipment; it also slowed up the reconstruction of war-damaged structures.

Further readjustments were made in the boundaries between the six individual railway regions and consolidation of commercial services in the large cities, such as Birmingham and Leeds, was carried further with the ultimate aim of integrating rail and road services. Falling revenues and rising costs induced the Transport commission to apply for a higher level of freight rates; an increase was granted in May, bringing the average level to 81% over that of 1938. No increase was requested in railway passenger fares. Further progress was made with the proposed charges scheme covering both rail and road freight traffic; this important scheme was to be presented in 1951. Some adjustments were made in October in the level of passenger fares in the London area chiefly affecting the services of London Transport; these were designed to bring in more revenue. The remarkable record of 1949, when no passenger was killed in a train accident, could not be claimed for 1950

Northern Ireland and Irish Republic. The Ulster Transport authority, embracing most Ulster public transport except the Great Northern railway and the Belfast municipal services, closed most of the former Belfast and County Down railway and replaced the rail by road services; other branch lines were closed, either entirely or to passenger traffic. The financial position of the G.N.R. serving N. Ireland and the republic became acute at the end of 1950 and the railway announced its intention to cease service unless a solution, which would involve government action by Ulster, could be found. The G.N.R.'s progressive policy in developing light diesel trains and inaugurating its "Enterprise" expresses between Belfast and Dublin, a service extended to Cork for the first time, merited better reward. From June the Irish railway (C.I.E.) became a nationalized concern having suffered serious financial deficits during the previous few years. The same chief executive was in charge of the management of both the G.N.R. and the C.I.E. concerns. The latter started to use main-line diesels.

Europe. Financial considerations in France limited construction projects to little more than the rebuilding of war-damaged facilities and the completion of electrification schemes in hand. Conversion to electric traction of the most important French railway artery, Paris-Dijon 196 mi., was completed in September, the southerly section between Laroche-Migennes and Dijon having been finished early in the year. A feature of the rearranged facilities was the ability to use either track, on certain sections, for northbound or southbound traffic, thereby avoiding expensive widening. New electric units of C_0-C_0 type were placed in service, and others of 4,000 h.p. and 2-D-2 type were employed on this heavily graded main line. France could claim the speediest passenger services in Europe in the summer of 1950 when 120 daily runs were scheduled at 60 m.p.h. or over, almost all with diesel or electric traction.

An experimental electrification scheme was completed using the 50-cycle single-phase system on the 48½-mi. Aix-les-Bains to La Roche-sur-Foron section; the results would be studied closely by railways in many countries because, if successful, the costs of electric traction for light traffic lines might be much reduced. The postwar 12-yr. electrification plan of the French railways called for the conversion of 1,125 mi. including the 320-mi. Paris-Dijon-Lyons section of the Paris-Marseilles main line: the tonnage of coal saved thereby in a year would be almost 1,600,000, but problems of finance might retard the programme. In the meantime a new type of 4-6-4 four-cylinder compound stoker-fired steam locomotive was placed in service. At Paris the new mechanized freight station of Tolbiac, which was to deal with 2,200 tons of southbound L.C.L. traffic a day, was completed, and an improved scheme of collection and delivery at Paris was inaugurated by the French railways cartage ancillary—S.C.E.T.A. An autonomous railway administration was set up in the Saar.

In Western Germany electrification of the Nuremberg-Regensburg 62½-mi. main line was completed in May, thus linking two sections already electrified, and projected conversions concerned the Stuttgart-Karlsruhe and the Karlsruhe-Basel lines. Reconstruction of war-damaged facilities continued in Germany, and in Austria conversion to electric traction in the Bischofshofen area made progress. The Italian state railways completed their vast Termini station at Rome in time for Holy Year traffic and electrification of the Avezzano-Sulmona line was finished in May. Much work had been done in providing housing accommodation for railway staff, an important problem in many European countries.

The Swiss federal railways continued widening the Zürich-Sargans line, and were operating 19 trains a day at 60 m.p.h. or over. The Swiss railways had also extended the use of 36-metre rails (118 ft. 1½ in.), and some new B_0-B_0 type electric units of improved design came into service. The Berne-Lötschberg-Simplon railway placed in international traffic a remarkable design of light-weight all-metal corridor coach providing a new standard of comfort for 54 passengers of a tare (empty) weight of only 33 metric tons. These cars were some of the finest and smoothest running vehicles in Europe. Switzerland was also experimenting with rubber-tyred railway cars.

Electrification figured largely in the Belgian national railways works programme in 1950, a start being made with the Brussels-Ostend line and the extension of the existing Antwerp electrification to Roosendaal (Dutch frontier). The Netherlands railway developments centred primarily on accelerated services giving door-to-door delivery of freight by a highway subsidiary using containers, thus ensuring overnight service throughout the Netherlands. In Scandinavia 85% of traffic on the Swedish state railways was electrically hauled but on the neighbouring Norwegian



Freight being loaded in Feb. 1950 on the first train to travel between Athens and Salonika since 1944.

system, in spite of hydro-electric resources, the comparative figure was only 20% though further electrification was planned.

The Spanish national railways pushed on with the construction of the Zamora-Orense-Corunna line, and in Portugal new electric multiple-unit trains improved the service on the Lisbon-Cascais railway. Railway construction and the re-gauging of narrow-gauge lines continued in Yugoslavia, and some new construction could be recorded in Bulgaria where the long Yeli Dol tunnel near Klisura, on the Zlatitsa-Sopot line, was pierced in August. It was impossible to check accurately much data concerning the railways of eastern Europe.

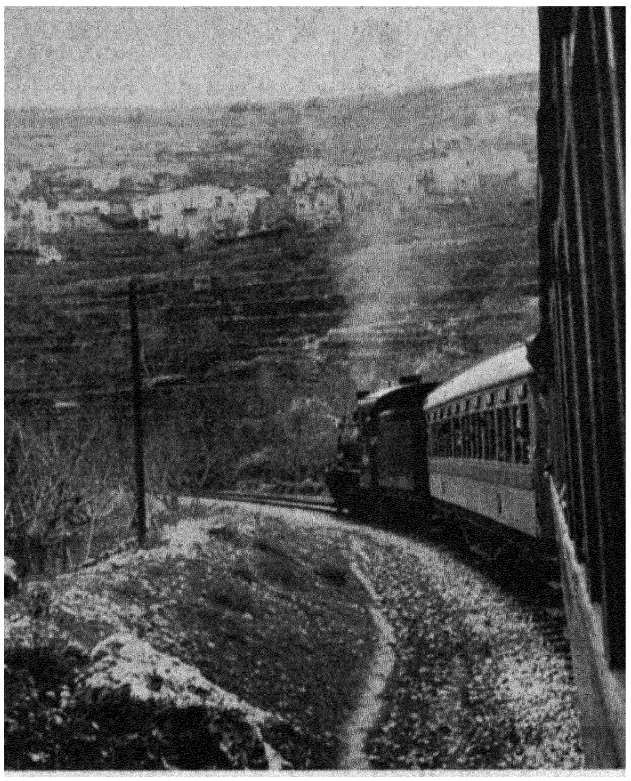
Asia. India proposed to regroup its various railway systems, but detailed plans had not been published at the end of 1950; in the north the metre-gauge railway link between India and Assam *via* Siliguri, avoiding Pakistan territory, was opened in January in advance of schedule. The scheme involved considerable new construction as well as the re-gauging of existing lines. In Pakistan certain mileage worked previously by the Jodhpur railway was to be re-gauged to 5 ft. 6 in. since no other metre-gauge railway existed in western Pakistan. Because of coal supply difficulties Pakistan converted many steam locomotives to oil-burners, over 50% of the North Western railway locomotives being so fitted. Similar conversions had begun of Eastern Bengal locomotives.

Reconstruction progressed in Burma and also in Malaya where civil unrest continued to restrict railway development and services. The Iraq state railways placed in service fine new passenger cars and the Persian state railways gave large orders for rails to complete the long-planned Tehran-Meshed and Tehran-Tabriz lines on which work many men were employed. Neither link was likely to be completed for some time since nearly 400 mi. remained to be finished on the Meshed line and 120 mi. on the Tabriz line.

Africa. New steam railcar sets using oil-fired boilers appeared on the Egyptian state railways, which had had long experience with this type of traction. The chief railway developments, however, took place in east Africa where the welding together of the Kenya and Uganda and Tanganyika systems, until latterly separate, made good progress. The 131-mi. Mpanda branch in western Tanganyika, built since 1948 to develop mineral resources, was opened in August. The combined East African Railways and Harbours administration, with lines of metre gauge, had received some heavy 4-8-4+4-8-4 Beyer Garratt steam locomotives, together with some lighter Garratts originally intended for Burma. Extra power was urgently needed in view of the steady increase in traffic, which totalled 70% in 10 years in Kenya and Uganda, whilst the facilities of the Rhodesian railways were fully extended by the traffic offered in 1950. Beira port had become a bottleneck and the development of alternative routes for Rhodesian exports and imports had been the subject of detailed examination including consideration of a possible link with the east African system although Rhodesia, like South Africa, had a 3 ft. 6 in. gauge.

The line serving Mozambique in Portuguese East Africa had been extended westward and stretched about 300 mi. from that port with farther extensions planned to near Lake Nyasa. In the same area the Tete line was opened from Dona Ana, on the Central Africa railway, to Moatize in 1949. South African railways were faced with steadily rising costs which outstripped the increase in revenue. Their route mileage totalled almost 13,400.

Latin America. Some of the last company-owned railways in Brazil were nationalized, the sale of the Great Western of Brazil, a British company, being approved in July. The São Paulo railway had been renamed the Santos Jundiai on being taken over by the federal government, and electric traction was inaugurated on the Jundiahy-Moocha section



The first passenger train travelling on the restored line from Tel Aviv to Jerusalem early in 1950.

of 40 mi. in July. For the newly electrified section C_0-C_0 type traction units were supplied from Britain. The system employed was 3,000 volts D.C., and at Jundiahy connection was made with the Paulista railway whose line was similarly electrified. The Leopoldina railway had also become entirely Brazilian, and suffered a serious accident in April when its track between Rio de Janiero and Victoria was washed away and a night train derailed with serious loss of life. Railway construction went on in Brazil and by 1950 route mileage totalled over 21,000.

In Argentina, after nationalization of all the main-line railways, the aim had been to eliminate inter-railway competition as on the Buenos Aires-Rosario route: redundant stations were closed and boundaries between the several railways were redrawn. New 4-8-0 steam locomotives were received from Britain for the General Roca railway, but it was proposed in future to develop diesel traction because of Argentina's oil resources.

Canada. The most striking feature of Canadian railway development was the growing turnover from steam to diesel-electric traction, exemplified by the use of these diesel units by the Canadian Pacific railway on the Vancouver Island and the Montreal-Wells River (Vermont) lines and also for freight traffic on the sections north of Lake Superior. The Canadian National was using 4,500-h.p. diesels on its trans-continental services, and the Pacific Great Eastern, north of Vancouver, proposed to replace steam traction entirely by diesel operation. Equally the Ontario Northland, owned by the Province of Ontario, embarked on a six-year programme of conversion to diesel traction. The increasing oil output in Alberta, the long hauls of coal and the availability of diesel locomotive construction shops at Montreal and London all contributed to the determination of this Canadian policy.

In July the Temiscouata railway, in New Brunswick and Quebec, was taken over by the C.N.R.; it had long been worked by the latter. A start was made with the construction of a new line from the north shore of the St. Lawrence gulf

to develop valuable mineral resources. The first national railway strike in Canada took place in August and required strong government intervention.

Australia. Locomotive fuel problems, labour troubles and shortage of key materials still hindered the efforts of the railways in the several Australian states to improve their services and overtake arrears of track and rolling stock renewals. Financial deficits, after payment of fixed charges, tended to increase, and there were heavy delays in the delivery of rolling stock ordered from Australian shops. New Garratt locomotives, however, arrived in Queensland, and 35 Pacific (4-6-2) class locomotives reached Western Australia from Britain. Further electrification was planned for the Melbourne area of Victoria and it was proposed to convert to electric traction the Brisbane suburban services in Queensland where a large scale rehabilitation programme had commenced. In Victoria certain sections in Gippsland were widened and roomette sleeping-cars were inaugurated on the Melbourne-Adelaide service. South Australia was re-gauging from 3 ft. 6 in. to 5 ft. 3 in. the Wolseley-Mount Cambier line, and Tasmania placed extensive orders for diesel and steam locomotives. The complete gauge standardization plan still hung fire. (C. E. R. S.)

United States. The demands of the larger volume of tonnage incidental to the accelerated programme of national defence and the military needs of the war in Korea were adequately met in 1950 notwithstanding shortages in the supply of goods wagons. Orders for new wagons were expanded early in the year and big efforts were made to reduce the number of wagons awaiting repairs to as nearly as possible to the desirable minimum of 4% of the total in use. By October the situation was fairly well in hand. During the first nine months of the year 26,237 new wagons had been put in service and nearly 100,000 were on order. The number out of service for repairs had been reduced from 7·3% of the total on Oct. 1, 1949, to 5·9% on Oct. 1, 1950.

An Interstate Commerce commission report showed that in the first nine months of 1950 74 passengers lost their lives in train collisions or derailments and 888 passengers were injured. These figures, moreover, did not include the 78 who were killed and the 203 who were injured in the Long Island collision of Nov. 22. During the first nine months of 1949 there was only one passenger fatality in train accidents.

The unfavourable earnings trend of U.S. railroads in 1949 was arrested in 1950 and the net income after payment of charges was more than in any year since 1943. An analysis of the higher net income of 1950 should, however, take account of the fact that the railroads made gross capital expenditures for additions and betterments of about $1,039 million as against $1,312 million in 1949 and the net addition to the investment account was $747 million. The rate of return on property investment was estimated as fairly close to 4% in 1950; 2·86% in 1949; 4·24% in 1948; and 4·73% in 1944. New capital for modern locomotives and rolling stock was readily available under equipment trusts or by lease from two insurance companies which in 1950 embarked on such a programme. Of the gross capital expenditure during the first six months of 1950 76% was for equipment and 24% for fixed property.

There were no general increases or decreases in freight and passenger rates during the year. The only changes to be noted were a 21% increase in charges by the Railway Express agency, a subsidiary of the railroads collectively; an increase of suburban season ticket rates on railways serving the cities of New York and New Jersey; and an upward adjustment in the rates paid to the railroads by the post office department for the transportation of mail. In Dec. 1950, the eastern railways petitioned the Interstate Commerce commission for permission to raise freight rates by 4%. The petition was presented before wage increases for train and yard service employees were granted on Dec. 21, which were estimated to add $131 million a year to operating expenses. The anti-trust suit instituted by the Department of Justice in 1944 against the western railways and certain individuals had not been concluded at the end of 1950, but the suit brought against the southern and eastern railways in 1944 by the state of Georgia, alleging undue discrimination against the state in freight rates, was dismissed by the Supreme Court.

As a counterpart of the Office of Defence Transportation, which during World War II was the government agency co-ordinating transportation in the interest of national defence, a Defence Transportation administration was created in Oct. 1950 by President Harry S. Truman; James K. Knudson of the I.C.C. was made director and given charge of priorities and allocations for rail, highway and inland waterway transportation. The secretary of the interior was given authority in those fields over oil and gas pipelines, and the secretary of commerce was given like powers over commercial air transportation and coastwise, inter-coastal and ocean shipping. The activities of these authorities had gone little beyond the organizational stages by the end of the year.

In labour relations, the year was one of almost continuous turmoil, with final achievement of substantial gains in a shorter working week and higher rates of pay. The year began with a heavy backlog of unsettled disputes. Direct negotiations between the railroads and the unions, mediation by officials of the federal government, and hearings and reports by fact-finding boards appointed by President Truman failed to bring the two sides together until late in the year. Strikes, both local and on a national scale, were called, and the president was forced to take over the railways and assign them to the secretary of the army for operation by their existing staffs under army supervision. The railways as a whole were under that type of government operation at the close of the year. Apart from a few disputes which were local to individual lines and were of a minor character there were two principal issues: (1) the demand by yard switching employees for a five-day week (40 hr.) with an increase in the hourly rate so that the weekly pay for five days would be as great as that for six days at existing wage rates; and (2) the employment of an additional fireman on multiple-unit diesel road locomotives and a fireman as well as an engineer on small diesels in yard service.

Negotiations with the railways and mediation at the White House level eventually brought about an agreement, with a three-year contract, on Dec. 21. The yardsmen belonging to the Brotherhood of Railroad Trainmen and the Order of Railroad Conductors, 95% of the total, were given an increase of 23 cents an hour, retroactive to Oct. 1, with an additional 2 cents to be given on Jan. 1, 1951, and future adjustments were to be geared to the cost of living. This settlement was somewhat better than that won by the Switchmen's union, which represented the remainder of the yardsmen, and in addition the railways agreed to an increase of 5 cents an hour to engineers, firemen, conductors and trainmen in road service, plus another 5 cents beginning on Jan. 1, 1951, with provision for future adjustments on the cost-of-living basis. This settlement, however, although agreed to by the national officers of the four train service unions, was subject to ratification by the general chairmen's committee of the unions. On Dec. 29 the terms were rejected by the engineers. The other three unions were to make their decisions early in January.

The second major cause of labour disputes in 1950 was the demand for the employment of an extra fireman on multiple-unit diesel locomotives. A fact-finding board had found in 1949 that the third man was unnecessary and recommended that the request be withdrawn. This the firemen refused to do

and, when they were unable to prevail upon the railways to meet the demand, a strike was called on May 10 on parts of four selected major railways. The partial paralysis of rail transportation that occurred, from an issue which a presidential fact-finding board had found to be without merit, caused such strong public criticism, that the strike was called off after six days. The union agreed to withdraw the demand for the third man on road diesels and the railways agreed to arbitrate two subsidiary issues. (W. J. C.)

RATIONING. The year 1950 was marked by further relaxations in many countries in the rationing restrictions of foodstuffs and petrol; although the events in Korea caused a number of countries to consider the re-imposition of rationing. At the end of 1950 the commodities still rationed in Great Britain were meat, bacon, sugar, tea, butter, margarine and cooking fats, cheese, eggs and sweets and chocolates.

The points rationing system for certain non-essential foods was relaxed in April and ended completely in May. It was first introduced in 1942 to ensure fair distribution of foods such as tinned meat and fish, dried fruits, biscuits, breakfast cereals, etc., but by May 1950 only a few items were still so rationed. The rationing of soap, first introduced on Feb. 9, 1942, was discontinued on Sept. 10, 1950.

Many of the Commonwealth countries lifted restrictions on the control of food during the year, and at the end of December there was no rationing of any kind in Australia and New Zealand. The last rationed commodity in Australia, tea, was freed in July. The rationing of butter had ended in Australia in June; in Southern Rhodesia it ended in May.

By the end of 1950 a number of European countries had completely ended food rationing. In January the last rationed food in France—coffee—was freed. West Germany was able to do without food rationing, and in August the vice chancellor, Franz Blucher, stated that there was no intention to introduce any kind of food rationing. In Denmark the rationing of butter and margarine ended on Nov. 7, having been in force for one day less than ten years. The rationing of margarine, butter and cooking fats ended in Norway on April 3. The trend however was reversed in Finland, where from Oct. 2 coffee was again rationed.

After being rationed from Sept 23, 1939, petrol was freed in Britain in May. This action was announced on May 26 after two American companies had agreed to sell additional supplies of petrol for sterling. Britain's action was followed in other parts of the Commonwealth: petrol was freed in New Zealand from June 1, in Pakistan from July 1, and in India from Oct. 22. In Australia, where petrol rationing had been a major issue in the election of Dec. 10, 1949, rationing ended in February.

RAU, SIR BENEGAL RAMA, Indian diplomat (b. Mangalore, Madras, Jan. 10, 1889), was educated at the Presidency college, Madras, and at King's college, Cambridge. He joined the Indian civil service in 1913 and, after holding various senior posts in the Madras government and in the taxation, finance and industries department of the central administration, became secretary to the Indian delegation at the round table conferences and joint parliamentary committee on the India bill, 1931-34. His diplomatic career began in the latter year when he went to London as deputy high commissioner for India. In 1938 he transferred to South Africa, at first as agent general, and in 1941 as high commissioner. In the following year he returned to India and became chairman of the Bombay port trust. In 1947 he went to Tokyo, with the rank of ambassador, as head of the Indian liaison mission and in 1948-49 was ambassador to the United States. In 1949 he became governor of the Reserve Bank of India. When on Jan. 1, 1950, India began its two-year term as a member of the U.N. Security council, Sir Benegal Rau took office as permanent Indian representative at the U.N. He made strenuous attempts to mediate in the Korean dispute, both in the Security council (of which he was chairman in June) and through unofficial conferences with General Wu Hsiu-chuan, the representative of Communist China.

RAYON AND SYNTHETIC FIBRES. The chief obstacle to the greatly increased use of rayon and synthetic fibres had been insufficient output capacity to meet all demands, but there were signs during 1950 that scarcity of certain raw materials might become another source of anxiety. During the year, however, new factories were opened, work was started on several more, including some in countries hitherto without rayon-producing units, and existing mills stepped up their output.

Production of rayon yarn in the United Kingdom during the first nine months of 1950 was 144·5 million lb., compared with 171·5 million lb. for the whole of 1949; production of staple fibre during the same period of 1950 was 128·4 million lb., as compared with 117·3 million lb. for the full year of 1949. Other European producers which made rapid recovery after World War II, and now had an annual production of rayon yarn exceeding 100 million lb., were Italy, France and Germany. The same three countries, especially Germany, had a large output of rayon staple. Germany, which in 1949 was the largest producer in the world, with an output of 265·0 million lb., seemed likely to regain that position in 1950, but with a somewhat smaller total. Outside Europe, Japan was the only large producer apart from the United States. Japan's output of rayon yarn was 44·8 million lb. in the first six months of 1950 and of rayon staple 62·1 million lb.; in the latter section of rayon manufacture Japan had already exceeded its 1949 total.

In view of the wool situation, great interest was taken in the announcement by Imperial Chemical Industries that its factory at Dumfries, Scotland, for the production of Ardil, a wool-like fibre from groundnuts, was nearing completion and that by the early part of 1951 sufficient plant and equipment would be in position to start production at about one-quarter of full capacity. This fibre is a protein having a close chemical relationship with wool and it was announced that it would first be used in blends with wool for light-weight fabrics. Later it was intended to introduce cotton-Ardil and rayon-Ardil fabrics, which would, in essence, be new types of material. Ardil is rather inferior in wet strength to wool, but has, on the other hand, crease-resisting and moth-resisting properties which, it was thought, would make it a valuable blending substance either with wool or other fibres. It was hoped that the new factory would ultimately produce 10,000 tons of Ardil a year.

I.C.I. also made public their plan to build at Wilton, in north Yorkshire, a plant for the manufacture of the new synthetic fibre, Terylene. This is a polymer from terephthalic acid and ethylene glycol and is chemically different from all other synthetic fibres. It had been discovered some years before by the chemists of the Calico Printers' association, Manchester, and I.C.I. acquired the rights for the whole world outside the U.S., where it was being made by Du Pont under the name of Fibre V. It was stated to be more than twice as strong as cotton, to stretch very little, to have good resistance to weathering and to be little affected by acids. The cloth could be set by heat to make it unshrinkable. The fabric woven from continuous filament was reported to be silk-like, to drape beautifully and to have a pleasantly soft texture. Materials made from Terylene staple on the worsted system were said to be very like wool in appearance and

texture. The new plant was to produce the fibre at the rate of 11 million lb. a year, with facilities for rapid extension when that became necessary. Raw materials would be obtained from the oil-cracking plant which I.C.I. had now almost completed on the same site.

Another event of great significance was the opening of Courtaulds' new factory at Carrickfergus, Northern Ireland. It was intended to employ about 1,600 people and 1,000 were already at work in 1950. The unit was devoted to the spinning of viscose rayon by the new continuous spinning process of the Industrial Rayon corporation. The same company, in conjunction with Australian interests, floated a company which was to undertake the manufacture of rayon at Newcastle, New South Wales. This factory, which would probably take four years to complete, would produce 6 million lb. of viscose tyre yarn and 3 million lb. of acetate textile yarn a year. Other British concerns announced their intention of embarking upon rayon processing in Australia.

The decision of the Australian government to raise import duties on British rayon piece goods from 1½*d.* to 1*s.* 6*d.* a yard caused great anxiety among British exporters. Australia was Britain's best customer for rayon piece goods and it was feared that there might be a considerable falling off in business. It was contended that this was a breach of the Ottawa treaty. The Australian Tariff board had recommended that the home industry should be assisted by a bounty of 1*s.* 6*d.* a yard on cloth produced, or partly by a bounty and partly by an import duty. An organization was formed in Australia with the object of securing a revision of the government's decision.

A number of European countries besides Britain started the manufacture of synthetic fibres; and one of three new Indian rayon plants went into production. (*See* also TEXTILE INDUSTRY.) (L. E. Ms.)

RED CROSS. The 21st meeting of the board of governors of the League of Red Cross Societies at Monte Carlo, on Oct. 16-20, 1950, with representatives from 58 countries, was an important event of the year. The conference appealed to all governments to adopt and maintain effective undertakings that would prohibit and prevent the use of non-directed weapons, atomic energy and similar forces for the purpose of warfare; requested the United Nations to make every effort to find means of returning Greek children to their homes, and also to take proper action for the repatriation of Palestinian refugees; authorized a Red Cross meeting in Germany to study the German refugee situation; approved a long-term programme for the co-ordination and standardization of Red Cross emergency relief; and approved a long-term public health programme for Red Cross societies. Justice Emil Sandstroem (Sweden) was elected chairman for the ensuing two years.

On May 1, the League of Red Cross Societies, the International Committee of the Red Cross and the American Friends Service committee transferred to the U.N. Relief and Works agency the care of about 900,000 Palestinian refugees in the near east whom they had cared for since Jan. 1, 1949, with voluntary contributions raised by the U.N.

A second mandate given the International Red Cross by the U.N. in Dec. 1948, the repatriation of about 25,000 Greek children who were in Czechoslovakia, Hungary, Bulgaria, Rumania and Yugoslavia, drew nearer realization on Nov. 25 when the Belgrade government through the Yugoslav Red Cross transferred to the delegate of the International Red Cross on the Greco-Yugoslav frontier 21 Greek children claimed by their parents in Greece. Governments of the other countries concerned, although agreeing to the principle of repatriation, had for various reasons refused actual transfer.

Following the outbreak of military action in Korea in June, an agreement was reached between the unified command and the U.N. and the League of Red Cross Societies whereby the latter was recognized as the co-ordinating agency for all Red Cross civilian relief in southern Korea; offers of assistance to the civilian population of northern Korea by the league remained without response from the Communist government. (*See* also PRISONERS OF WAR.) (H. W. DG.)

REFUGEES. Europe. About 225,000 of the Polish, Ukrainian, Lithuanian, Latvian, Estonian and Yugoslav refugees remaining in Germany, Austria and Italy as a result of the displacements of World War II were assisted by the International Refugee organization (I.R.O.) during 1950 to find new homes in other countries. Eighteen governments had become members of the organization, which by June 30, 1950, had expended $332,245,213 on behalf of refugees. Of this sum $146,599,346 covered overseas transport and resettlement costs and $183,260,812 was devoted to the care and maintenance of refugees before movement in repatriation or resettlement.

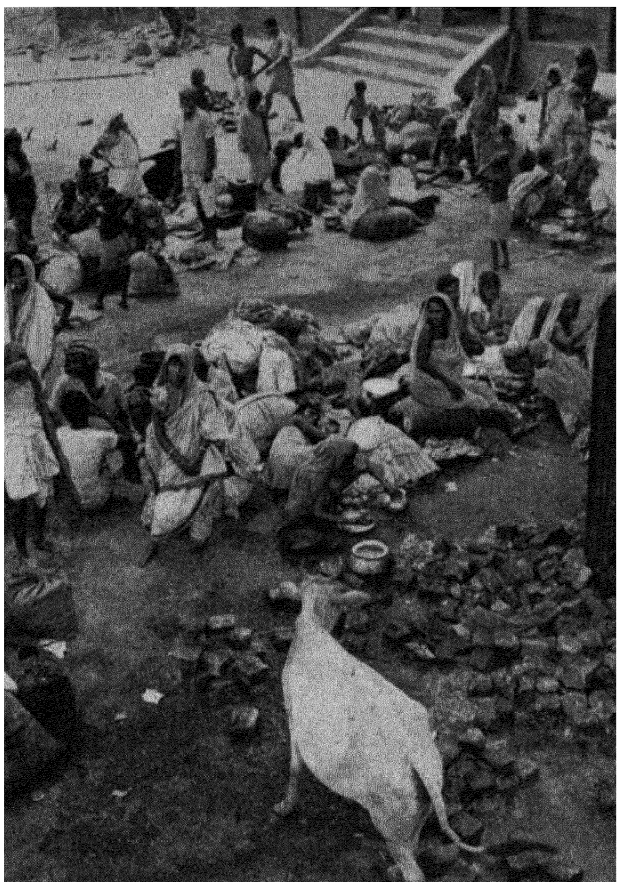
The I.R.O. had repatriated or resettled a total of 950,000 refugees and displaced persons by Dec. 31, 1950. During 1950 it was originally planned by the general council of the I.R.O. to terminate the services of the organization by March 31, 1951. However, because of delays experienced during 1950 in the documentation and movement of refugees to Australia and to the United States under the U.S. Displaced Persons act of 1948, the council of the I.R.O. decided at its sixth session at Geneva in Oct. 1950 to continue operations until Sept. 30, 1951. This extended programme was to be financed by funds available to the organization from the previous contributions of member governments without the necessity for further contributions. The council voted to offer resettlement services to those refugees who had arrived in areas of operations between Oct. 15, 1949, and Oct. 1, 1950. These refugees, numbering more than 20,000, had previously been excluded from such services by earlier decisions of the council.

On July 1, 1950, the I.R.O. transferred its previous responsibilities for the general supervision and care and maintenance of about 100,000 non-resettleable refugees to public authorities and private relief agencies in the countries of residence of the refugees in Europe. Many of this group had already achieved self-dependence, but all faced uncertainties in legal status pending the acquisition of a new nationality.

The I.R.O. continued its efforts during the year to make permanent arrangements for about 20,000 refugees and their dependent relatives who required continuing hospital or institutional care because of age or infirmities; $22 million was allocated to provide capital installations for the housing and hospital treatment of these refugees. Tentative arrangements for permanent care had been made for 11,000 of these so-called " hard-core " refugees and 9,000 remained awaiting the conclusion of arrangements for permanent care. Belgium, France, New Zealand, Norway and Sweden offered rehabilitation and permanent custodial care for a substantial number of aged, blind and tubercular refugees during the year.

Completing action initiated at its previous session, the general assembly of the United Nations on Dec. 14, 1950, established the Office of High Commissioner for Refugees at Geneva and elected G. J. van Heuven Goedhart, of the Netherlands, as high commissioner for a three-year period beginning Jan. 1, 1951. This office was set up to provide legal protection for refugees until they should acquire nationality in their new countries of residence.

The general assembly in Dec. 1950 also decided to convene in 1951 at Geneva a diplomatic conference to complete and sign the convention relating to the status of refugees



Hindu refugees who fled from Pakistan because of communal riots early in 1950 seen in a transit centre in India.

recommended to it by the Economic and Social council. This convention, when in force after adherences by governments, would provide refugees with a legal status and serve as the chief tool of the high commissioner for refugees in securing non-discriminatory treatment for refugees in their countries of residence.

The refugees falling under the competence of the high commissioner would be in general, those previously the concern of the International Refugee organization--namely, those unable or unwilling to avail themselves of the protection of their former country of nationality on account of fear of persecution because of race, religion or political opinion. However, members of former German minorities in eastern European countries now resident in Germany and refugees in India and Pakistan did not fall under the competence of the high commissioner because they enjoyed the rights of a nationality and did not require legal protection under international auspices.

On June 16, 1950, the U.S. congress adopted amendments to the Displaced Persons act of 1948 extending the period for the issuing of visas from June 30, 1950, to June 30, 1951, substituting Jan. 1, 1949, for Dec. 22, 1945, as the date on which refugees must have entered Germany, Austria and Italy to qualify under the act and increasing the number of visas to be issued from 205,000 to 341,000.

Near East. United Nations efforts to resolve the problem of 800,000 Arab refugees in the near east resulting from the conflict in Palestine in 1948 made slow progress during 1950. Refugees from that part of Palestine incorporated into the state of Israel were located in the neighbouring states of Lebanon, Jordan, Syria and the Egyptian-held area of Gaza in southern Palestine. The general assembly of the United Nations in its resolution of Nov. 19, 1948, established the United Nations Relief for Palestine Refugees (U.N.R.P.R.) and appealed to governments to provide $32 million for direct relief of the refugees. This sum contributed by governments had maintained the refugees on a relief basis during 1949. On Dec. 11, 1948, the general assembly also established the Palestine Conciliation commission to facilitate a peace settlement and to secure the repatriation or resettlement of the refugees and compensation for their lost properties.

The efforts of the Conciliation commission proved unavailing, and on Dec. 8, 1949, the general assembly established the United Nations Relief and Works Agency for Palestine Refugees (U.N.R.W.A.) as a successor agency to U.N.R.P.R. Emphasis was to be placed upon gradually reducing the relief programme and initiating works projects as a measure of assisting the refugees to re-establish themselves.

An 18-month budget totalling $54·9 million for the period Jan. 1, 1950, to July 1, 1951, was adopted; $33·7 million for relief and works projects during 1950 and $21·2 million for works projects for the period Jan. 1 to June 30, 1951.

During 1950 a number of road-building and afforestation projects were undertaken, and previously initiated crafts programmes of weaving and garment making were expanded. By Dec. 1, 1950, about 20,000 refugees were employed on these projects, which thus supplied a livelihood for 100,000 persons. However, the high cost of work relief projects taxed the resources of U.N.R.W.A. which recommended to the general assembly in Dec. 1950 that these projects desirable in themselves would not contribute to the permanent employment or reintegration of the refugees in the economic life of the area. The expectation that direct relief operations could be concluded in 1950 was not realized.

The general assembly consequently adopted a modified programme on Dec. 2, 1950, and authorized U.N.R.W.A. to set up a reintegration fund of $30 million for the period July 1, 1951, to June 30, 1952, and to continue to furnish direct relief during that period at a cost not to exceed $20 million. The reintegration fund was to be used to secure the permanent re-establishment of the refugees with the co-operation of any near eastern government prepared to assist the agency in this undertaking. (*See* also IMMIGRATION AND EMIGRATION.) (G. L. W.)

REICHSTEIN, TADEUSZ, Swiss chemist (b. Włocławek, Poland, July 20, 1897), spent his earliest years at Kiev, where his father was an engineer. He later emigrated to Berlin and then to Zürich, becoming a Swiss citizen in 1914. After graduating (1920) as a chemical engineer from the Eidgenössische Technische Hochschule, he spent one year in a factory and then returned to Zürich to take his doctorate in engineering chemistry in 1922. He stayed on at the Technische Hochschule to undertake extensive researches on the aromatic substances of roasted coffee. This work was not completed until 1931, but meanwhile he had become a part-time instructor and given courses on the methods of organic chemistry and on heterocyclic compounds. He was appointed full-time assistant to Professor L. Ruzicka in 1931, assistant professor in 1934 and associate professor in 1937. He was at the university of Basle as head of the department of pharmacy and director of the Pharmacological institute from 1938 to 1946 and thereafter as professor of organic chemistry. His first great achievement was the synthesis (1933) of l-ascorbic acid and the discovery of the standard method of producing this vitamin on a commercial scale. His work on the isolation and the determination of the constitution of the suprarenal gland and the partial syntheses of its constituents began in 1935. He and his associates isolated about 28 hormone substances from it, including Compound E (Cortisone), which he succeeded in synthetizing almost simultaneously with E. C. Kendall (*q.v.*)

and other American workers. His investigations on the steroids of plants enabled him to indicate possible means of converting them into Cortisone and so of overcoming the enormous difficulties in the way of large-scale production. Other important researches were concerned with sugars and especially with the cardiac glucosides. In 1950 the Nobel prize for medicine was awarded jointly to Reichstein, P. S. Hench (*q.v.*) and Kendall for their discoveries concerning the suprarenal cortex hormones. (W. J. Bp.)

REPARATIONS. The World War II reparations programme in Western Germany was almost completed during 1950. Shortly after the signing of the Petersberg agreement in Nov. 1949, the Inter-Allied Reparation agency (I.A.R.A.) received from the western occupation authorities the final list of plants available to it, and on May 25, 1950, I.A.R.A. made the final allocation of industrial equipment to its member nations. Dismantling and shipment continued during the year.

In February N. E. P. Sutton, the secretary general of I.A.R.A., released his report for the year 1949, in which he estimated the total value of German reparations which would have been received by member nations when the agency ceased operations, as follows (in 1938 dollars):

German external assets	$293,300,000
Incorporation of the Saar into French economy	17,500,000
Industrial capital equipment	146,800,000
German merchant shipping	43,200,000
U.S.S.R. reciprocal deliveries	1,500,000
Captured enemy supplies	14,700,000
	$517,000,000

According to the secretary general's report, member nations had received the following amounts of reparations as of Dec. 31, 1949 (in 1938 dollars):

Albania	$975,974	Norway	$11,294,660
Australia	3,084,078	New Zealand	1,053,874
Belgium	15,161,965	Pakistan	1,108,328
Canada	2,919,363	The Netherlands	34,500,986
Denmark	17,277,486	Czechoslovakia	11,177,432
Egypt	2,565,613	Union of South Africa	6,940,352
France	68,054,728	United States	102,569,186
Great Britain	84,249,297	Yugoslavia	29,875,350
Greece	10,150,646		
India	8,269,015		
Luxembourg	1,578,497	Total	$412,806,830

The secretary general pointed out in his report that between March 1946 and Nov. 1949 the number of plants to be made available to I.A.R.A. was progressively and drastically reduced from 1,800 to about 680. Moreover, substantial parts of may plants which still remained on the list were to be left in Germany. He also pointed out that the 1938 replacement cost of industrial equipment which had been made available to I.A.R.A. was only about 1·3% of the replacement cost of the total investment in German industry in 1938 and that 31% of the industrial equipment allocated to I.A.R.A. came from munitions plants, a large proportion of which had been built during World War II. He concluded that the payment of reparations had had little effect upon the German economy and that the successive cuts in the reparations programme had very little economic justification.

On May 16, Joseph Stalin announced a reduction in Soviet reparations demands in a letter to Otto Grotewohl, premier of Eastern Germany. Stalin stated in his letter that by the end of 1950 Eastern Germany would have paid an estimated $3,658 million on account of total Soviet reparations demands of $10,000 million. In view of this showing, the Soviet government, in agreement with the Polish government, had decided to reduce the sum of reparations payments still to be made by 50%, or to $3,171 million, to be paid from current production over a period of 15 years. The figure of $3,658 million cited by Stalin was at wide variance with reliable western calculations. The office of the U.S. high commissioner estimated that the U.S.S.R. had taken $18,000 million in equipment and goods out of Germany since 1945.

(J. W. Mw.)

REPRESENTATIVES, HOUSE OF: *see* Congress, U.S.

REPUBLICAN PARTY, U.S.: *see* Political Parties, U.S.

RESTAURANTS: *see* Hotels, Restaurants and Inns.

RÉUNION. Former French island colony in the Indian ocean (about 420 mi. E. of Madagascar) the status of which was changed in 1946 to that of an overseas *département*. Area: 970 sq.mi. Pop.: (1936 census) 209,113; (1946 census) 242,067 of whom 97% were French subjects but only 6,698 of French origin. The inhabitants are mainly coloured (Negroes, creoles, mulattoes, Indians and Chinese), speak a creole *patois* and are mainly Roman Catholic Chief towns (pop., 1946 census): Saint-Denis (cap., 36,096); Saint-Louis (23,936); Saint-Paul (25,959); Saint-Pierre (22,379). Prefect, Roland Béchoff.

History. The island was stricken in Jan. 1950 by a cyclone which destroyed 2,000 huts and severely damaged the maize and sugar-cane crops. This was particularly disastrous since planters needed to increase the sugar-cane yield substantially. In 1950 the sugar went to the mother country (58,000 metric tons), Morocco (25,000 tons) and Indo-China (20,000 tons). Port facilities were seriously inadequate.

A company was formed in January to undertake the electrification of the *département*. Three electricity power stations were in course of construction at the end of the year. The introduction of free medical assistance produced an immediate reduction in the mortality rate (6,898 deaths in 1948 and 4,690 in 1949) and especially in infant mortality (from 2,290 to 1,574). Alcoholism, however, was leading to degeneration of the race, and the public authorities were obliged to prohibit the sale of rum and of all spirits for consumption on the premises. The political scene showed signs of trouble, particularly on account of the activities of the Communist party which was strongly represented in the elected assemblies.

Agriculture. Main products (1949, metric tons): sugar cane 1,058,500; sugar 107,625; rum 84,709 hl.; vanilla beans 40; maize 15,000.

Foreign Trade. (Million francs C.F.A., 1949; 1950, six months, in brackets) import 3,499·5 (2,378·3); export 3,020·5 (1,632).

Transport and Communications. Railways (1948): 127 km. (100 cm.-gauge). Roads (1949): 1,909 km. Motor vehicles licensed (Dec. 1948): cars 2,515; commercial 1,090. Shipping, cargo (1949, '000 metric tons): unloaded 97·8; loaded 109·1. Telephone subscribers (1948): 1,950.

Finance. Budget (million francs C.F.A.): (1949 actual) balanced at 1,029·7; (1950 est.) balanced at 1,224·5. Monetary unit: franc C.F.A. (Colonies Françaises d'Afrique) = M.Fr. 2. (C. A. J.)

RHEE, SYNGMAN (Ree Syn Man), Korean political leader (b. Whanghai province, Korea, April 26, 1875). He received a classical Chinese education, and then enrolled in a Methodist mission school in Seoul. Imbued with democratic ideals, he joined an Independence club in 1894 and founded the *Independent*, Korea's first daily newspaper. In 1897 he led a mass demonstration of students against the Japanese, was arrested and sentenced to life imprisonment, though he was freed in a general amnesty in 1904. Meantime he had become a Christian convert and while in prison had written the book *Spirit of Independence*. He travelled to the U.S., studied at Harvard and Princeton and returned to Korea in 1910 to organize resistance to the Japanese occupation. Discovered, he fled to Hawaii where he directed the Korean Christian institute until 1939. On March 1, 1919, a group of Korean patriots signed a declaration of independence, set up an exile government in Shanghai, China, and elected Rhee president. He was regularly re-elected until 1941. To win

U.S. recognition of Korean independence claims he went to Washington during World War II. In 1945 he returned to Korea and was elected first president of the Republic of Korea on July 20, 1948. When the North Korean forces invaded the republic in 1950 Rhee moved the government from Seoul, but returned there when the United Nations forces recaptured the city, only to flee with the government again when the Chinese Communists entered the war.

RHEUMATISM: *see* ARTHRITIS.

RHODESIA, NORTHERN: *see* NORTHERN RHODESIA.

RHODESIA, SOUTHERN: *see* SOUTHERN RHODESIA.

RICE: *see* GRAIN CROPS.

RIFLE SHOOTING. The National Rifle association celebrated the 60th anniversary of its move to Bisley in July 1950; and both it and the National Small-bore Rifle association had record entries in that year. There were almost 1,700 competitors at the Imperial Bisley meeting for service rifle and revolver shooting including an overseas entry of 105; and for the Cadets' Bisley there were 674 entries. The King's prize had 1,333 competitors; Capt. R. D. Greig won it on his last shot. Major R. M. Parsons again won the Army championship; Lt. Col. B. D. Shaw won the Territorial Army championship. In the Canadian National championships the British team won, among other prizes, 1st, 2nd and 3rd places in the major event, the Governor General's match.

The British Small-bore championship was won by H. R. Hammond, a railway clerk, after a double tie shoot with F. K. Lamberg, another Londoner. For the first time an overseas small-bore match was fired, Canada beating Rhodesia by a small margin.

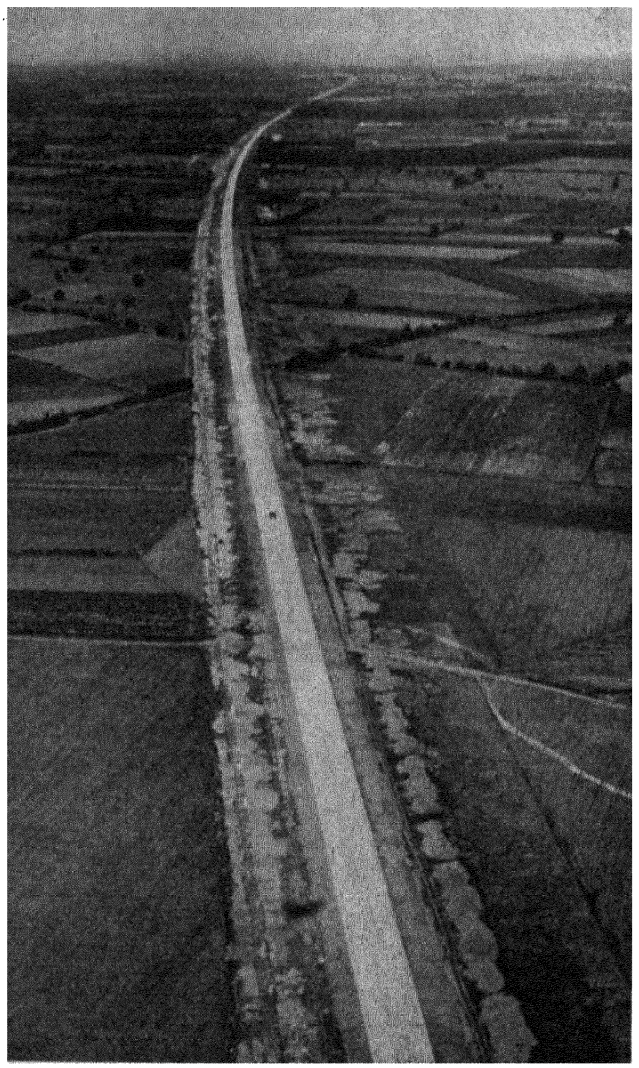
One of the biggest of about 50 small-bore postal events was the Winter league, in which 420 teams competed. Britain's small-bore shooters beat Sweden in the annual match at 50 m. range and the Dominion countries in the Dewar Trophy match at 50 and 100 yd. range. In the pistol match for the Mayleigh cup Great Britain beat Canada by a narrow margin. (A. J. P.)

RIO DE ORO: *see* SPANISH COLONIAL EMPIRE.

RIO MUNI: *see* SPANISH COLONIAL EMPIRE.

ROADS. Eastern Hemisphere. *Methods of construction.* Outstanding features of modern road building during the few years immediately prior to 1950 were the increased use of machinery for laying and finishing road pavements and the greater use of concrete and of bituminous materials. An important development in mechanical methods of construction took place which made it possible to lay the whole road structure by machine, substituting for the old hand-placed pitching base courses of machine-laid broken stone either coated with bituminous binder or uncoated. This laying could be done either by specially designed machines such as the Barber-Greene road finisher or by bulldozers and graders. Equally important were the growing appreciation of the soil as a part of the road structure itself and the study of soil as an engineering material. Increased understanding of the effect of the subsoil on the behaviour of the road pavement enabled methods of design to be considerably improved. Such studies were continued in 1950 in engineering laboratories in many countries. One possibility opened up by research was that of stabilizing clay soils, hitherto one of the chief sources of difficulty in the construction of foundations for roads and airfields for heavy traffic.

The scientific study of surface dressing led to marked improvements in practice in 1950 and improved machinery



Part of the 234 mi. Belgrade-Zagreb highway which was opened on July 27, 1950.

was developed both for applying the binder and for applying the stone. Some experimental work was done on the application of the principles of pre-stressed concrete, already successfully used in the construction of bridges and other structures, to the construction of roads. Short lengths of pre-stressed concrete road were laid in France and the United Kingdom. Interest was shown in the possibility of improving the life of bituminous road surfacings by the incorporation of rubber with the bitumen. Experiments had already been carried out in a number of countries, notably the Netherlands and Indonesia, and new experimental surfaces were laid in London and Singapore.

International routes. With the increase in international road traffic after World War II, the need for agreement on international routes became evident. In Sept. 1950, representatives of 15 European countries, in a sub-committee of the United Nations Economic Commission for Europe at Geneva, agreed in principle to a declaration on the construction of main international traffic arteries in Europe. The declaration was signed by Belgium, France, Luxembourg, the Netherlands and the United Kingdom, and remained open for signature by others. The signatories adopted "the proposed road network.....as a concerted plan for construction and reconstruction of roads of international importance," which they intended to undertake "within the framework of their national programmes for public works or within the possibilities of international financing." The

22 main arteries listed included: E.1, London-Paris-Nice-Rome-Palermo; E.4, Lisbon-Berne-Copenhagen-Stockholm-Helsinki; E.6, Rome-Berlin-Oslo-Skibotten; E.22, Berlin-Wrocław-Katowice-Cracow-Rzeszów-Przemyśl-(U.S.S.R.). Seventy branch or link roads were also listed, making a total of over 48,000 km. The characteristics required of the main arteries were specified. Only Belgium, France and the United Kingdom indicated that they could carry out the proposed improvements with materials from their countries' internal resources.

Motor Roads. The problems of providing special roads for fast moving motor traffic and of the design of such roads from the points of view of durability, economy, traffic flow and safety were given serious consideration by highway authorities and engineers in many countries. In the United Kingdom the Special Roads act, 1949, had already made provision for " the construction of roads reserved for special classes of traffic." No construction could be started because of lack of funds, but plans were suggested for motor roads in some areas. In France the southern section of the west motor road from Paris was opened to traffic in July. Plans were made for the road Paris-Lille and for expressways and road tunnels in Paris.

In Germany, in addition to the repair of damaged sections of the existing *Autobahn* network, plans were made to improve and extend it, notably along the routes Hanover-Hamburg and Stuttgart-Heilbronn. Work was started on the construction of the road from Düren to Cologne. The Belgrade-Zagreb motor road in Yugoslavia was opened to traffic in July, and work was started on the first motor road in Morocco, from Casablanca to Rabat, which was expected to take 12 to 15 years to complete. Among other work of this kind scheduled was the completion of the Ostend-Aachen road in Belgium and a road from Genoa to Switzerland as part of the European system.

Other Road Construction. In Europe the work of restoring communications destroyed by World War II continued. From Italy it was reported that of 27,000 mi. of roads damaged 18,000 mi. had been reconstructed, and 8,000 mi. of new roads built since the end of the war.

France announced plans for the improvement of " tourist roads," and in Spain work was started on the improvement of main roads to Madrid.

The U.S.S.R. planned to build 11,500 km. of new concrete roads under the current 5-yr. plan and in Japan an extensive programme was drawn up, calling for the construction of about 900 new road bridges.

Roads from Istanbul to Erzerum and Adana were opened in Turkey. In Saudi Arabia a contract was signed for a new 260-mi. road from Jedda to Medina. Extensive programmes for improvement were announced in Persia, Egypt and Ethiopia, where a new modern road bridge over the Blue Nile was opened. In Pakistan a roads congress was formed, composed of official and non-official engineers, to draw up an overall development plan for roads and bridges for the whole country. In India the General Road Research Institute of India was opened in New Delhi. In the Union of South Africa various national roads were improved by the laying of bituminous surfacings, including the route north from Capetown to Beit Bridge. Work was also in hand on the continuation of this road through Southern Rhodesia and Northern Rhodesia, intended to provide a continuous all-weather route from Capetown to Nairobi (3,840 mi.).

Under-Developed Territories. The Economic Co-operation administration allotted nearly $1 million for the purchase of United States equipment to be used in road development projects in seven British territories; viz., Gold Coast, Northern Rhodesia, Nigeria, Sierra Leone and Nyasaland in Africa, and North Borneo and Sarawak in southeast Asia. The aid for African road development was intended to open up isolated areas as well as to improve existing facilities. From the Paris office of the E.C.A. it was reported that under a 10-yr. development plan for French Equatorial Africa, Fr. 16,000 million was to be set aside for the development of 8,500 mi. of highways, to be undertaken with the help of heavy road building equipment imported from the U.S. under the European Recovery programme. A new 10-yr. development plan was announced for the Belgian Congo, which included the construction of new roads and repairs to existing roads and bridges.

In Tanganyika work was started on the replacement of the existing main roads with tar macadam highways, as part of a 10-yr. development plan financed by colonial development and local funds. (W. H. G.)

Western Hemisphere. *United States.* The surfaced roads outside of cities grew to about 1,637,000 mi. but a large portion of this mileage was no longer adequate for the greatly increased traffic. There was serious congestion and delay on highways in all cities and travel on many sections of main highways between cities was made difficult and dangerous by deficiencies in surface condition, width, grade and curvature. The cost of correcting existing deficiencies was variously estimated at from $42,000 million to $47,000 million. In a number of states plans for more rapid highway improvement and for increasing funds for highways were debated. In the last half of 1949 and during 1950 ten states increased the rate of tax on petrol to produce more highway funds.

With use of highways, congestion and public demand for better highways at their greatest, highway organizations made improvements as quickly as possible with the funds available. There was a marked increase in the number of cities constructing " expressways " to solve their worst traffic problems. Construction of four-lane, divided highways, often with controlled access, was accelerated. Many miles of obsolete two-lane roads were widened and straightened, often by relocation. Building of secondary or farm-to-market roads went forward at a record-breaking pace.

Awards of construction contracts by state highway departments in the first nine months of the year totalled $1,100 million for 48,800 mi. of road. It was indicated that the total for the year would rise to $1,500 million for 65,000 mi. It was estimated that about 45,000 mi would be completed.

Alaska. The enlarged programme of modernizing Alaska's 2,000 mi. system of main highways, begun in 1949, was continued in 1950. Improvement of the Alaska highway from the Canadian border to Fairbanks and highways from Fairbanks to the coast at Anchorage and Valdez at a cost of $45 million went forward rapidly. The year's work resulted in about 150 mi. of improvement.

Alaska Highway. The Canadian and Alaskan sections of the Alaska highway were kept in good condition by the respective governments and served an increasing volume of tourist and commercial traffic. The highway was occasionally closed to travel for short periods because of the weather, but in general it was open to travel throughout the year.

Canada. A growing population and rapid development of resources led to a large programme of construction in every province. The character of the work ranged from four-lane, divided highways near some of the larger cities to pioneer trails reaching out into remote unsettled areas. For many years there had been discussion of a Trans-Canada highway and sections of a projected route had been improved but there still was no satisfactory route across Canada. In 1950 the government decided to complete the highway in a period of six or seven years. The government entered into an agreement with nine of the provinces and was

negotiating with the remaining one to complete the highway to high standards at a cost estimated at $300 million and share the cost equally.

Mexico. Improvement of main highways and of farm service roads went forward at a rapid pace. Opening of the final section of the Inter-American highway in Mexico was celebrated in May, making travel possible over the entire 2,176 mi. from the Texas border to the Guatemalan border.

Inter-American Highway. Lack of funds reduced the rate of progress below that of previous years. Some construction work was done in Guatemala and Nicaragua. Of the 3,200 mi. from the United States to Panamá City, 61% was paved, 30% was unpaved but was passable at all times. 1% was passable only in dry weather and 8% was impassable at all times. Beginning at the Mexican-Guatemalan border there was an impassable gap of 25 mi., another of 65 mi. in northern Costa Rica and one of 150 mi. in southern Costa Rica and Panama.

South America. In most of the countries of South America construction of highways was accelerated and plans were made for still greater progress in the future. The U.S. assisted the Peruvian government in reorganizing its highway department, purchasing equipment and training men to operate and repair the equipment. Reports from Colombia, Ecuador, Peru, Bolivia and Chile indicated marked increases on road construction activity. Brazil had numerous construction jobs under way. A large assembly of modern road building equipment was at work on the most impressive construction yet undertaken, a 258-mi. highway from Rio de Janeiro to São Paulo. Starting out as a four-lane divided highway from each city the roadway reduced to two lanes where traffic was not yet heavy but grading was being done for a second two-lane pavement to be placed when needed. The travel distance between the two cities would be shortened by almost 70 mi. and there were to be no crossings at grade. The project was notable for the 98 bridges required. (T. H. MACD.)

ROKOSSOWSKI, KONSTANTY, Soviet army officer of Polish origin (b. Grójec, near Warsaw, 1896), son of an engine driver. In World War I he was conscripted into the Russian army, rose from private to lieutenant, and in Nov. 1917 joined the Red guard. After the Civil war he graduated from the Frunze Military academy, Moscow. He served in Siberia and Mongolia (1937-40), was moved to Europe and in June 1941, as major general, was in command of a tank corps. As commander of the Sixteenth army he took part in the defence of Moscow (Oct.-Dec. 1941); at the head of the Don army group he distinguished himself at Stalingrad (Nov. 1942-Jan. 1943). Promoted marshal on June 29, 1944, he led his new army group (2nd Byelorussian) to Poland but at the beginning of August stopped at the Vistula river. He crossed the Vistula in Jan. 1945 and four months later was at the Elbe. After the German armistice he was in command of the Soviet troops occupying the new Polish western territories, with headquarters at Legnica. On July 22, 1949, he was present in Warsaw at the opening of the new east-west thoroughfare. On Nov. 6 he was accorded the rank of marshal in the Polish army; he was appointed minister of national defence and commander in chief of the Polish forces. On May 8, 1950, he was elected a member of the Politburo of the Polish Communist party. On Oct. 12, speaking in Warsaw, he stated that the new Polish army existed because of the brotherly help of the Soviet Union and the personal friendship of Generalissimo Stalin.

ROMAN CATHOLIC CHURCH. The Holy Year (*q.v.*), the definition on Nov. 1 of the dogma of the Assumption of the Blessed Virgin Mary and the celebrations in September of the centenary of the restoration of the hierarchy in England and Wales were the outstanding events of 1950 for Roman Catholics. But the conflict in the countries of eastern Europe demands first attention here. Figures for the past five years published in Rome in October showed a total of about 11,000 priests and religious said to have been executed, imprisoned or deported by the Communist regimes of those countries. The archbishops arrested in the previous years were still unreleased; and the death in prison of the last surviving member of the hierarchy of Lithuania, Mgr. Kazys Paltarokas, became known in March.

In the face of the increasingly severe persecution there was for the first time some tendency on the part of the bishops of eastern Europe, against the advice of the Vatican, to sign agreements with the Communist governments: one was signed in Poland on April 14, another in Hungary on Aug. 30, both preceded by an intensive campaign of intimidation by the state. In Poland on Jan. 23 the government had arbitrarily nominated a new administrative body for *Caritas*, the nation-wide relief organization of which Cardinal Adam Sapieha, archbishop of Cracow, was chairman; on Feb. 27, when the bishops had protested, it had accused them of taking action hostile to the state; and on March 6 the prime minister had laid before the Sejm a proposal for confiscating the lands of the church, which became law on March 20. On April 13 Cardinal Sapieha left for Rome, the only bishop from eastern Europe able to travel to Rome during the Holy Year; and on April 16 it was announced in his absence



Four of the cardinals who attended the centenary celebrations in Great Britain in Sept. 1950. Left to right, Joseph van Roey (Belgium); Pierre Marie Gerlier (France); James McGuigan (Canada) and Konrad von Preysing (Germany).



Pope Pius XII (left, foreground) being carried to a temporary throne in front of St. Peter's on Nov. 1, when he proclaimed the dogma of the bodily Assumption into Heaven of the Blessed Virgin Mary.

that an important and far-reaching agreement between church and state had been signed in Warsaw on April 14. On Oct. 24 the government accused the bishops of violating this agreement by failing to ignore the Vatican in the matter of settling the ecclesiastical administration of the lands between the rivers Oder and Neisse, still *sub judice* in international law. Two letters to President Bierut, the first signed by all the bishops and dated Jan. 30, the second signed by Cardinal Sapieha and the primate, Mgr. Stefan Wyszyński, dated Feb. 16, gave details of the many-sided and ever-increasing persecution which was the background to the agreement. One feature of the government's preparation for it, in particular, had its counterpart in other countries: the state-sponsored "meeting of priests" in Warsaw on Jan. 30, intended to detach the lower clergy from loyalty to their bishops (*cf.* those at Târgul Mureş in Rumania on April 27 and at Budapest in Hungary on Aug. 1).

The campaign in Hungary rested chiefly on the intimidation of the religious orders: the government throughout the period of the negotiations constantly invaded the monasteries and convents, carried the monks, friars and nuns off to "concentration monasteries" and threatened the total dissolution of the orders. The bishops signed the agreement of Aug. 30 in the hope that this at least had been averted; yet only a week later the orders nevertheless were dissolved by government decree, more than 10,000 religious being secularized and thrown into the world to arrange their lives as best they might. The only exceptions were in favour of those conducting eight schools which, by the terms of the agreement, were allowed to continue.



The badge worn by Roman Catholics in Great Britain during the centenary congress.

Persecution of the orders was also a special feature of the year elsewhere behind the iron curtain. It began in Czechoslovakia with the trial of ten priests from the leading orders, which ended in Prague, on the Wednesday of Holy Week, with sentences of life or long-term imprisonment for all the accused. Soon afterwards came the expulsion of many religious from their monasteries and convents, the confiscation of their property and their internment in "concentration monasteries." The only differences were that in Czechoslovakia the total dissolution was not decreed in so many words and that the nuns were relatively immune because of their social value as nurses in the hospitals. In Rumania the year saw the official outlawing of the Latin Catholics, with the withdrawal of recognition under the Law for the Regulation of Cults of 1948; the Uniate Catholics had already suffered this fate. The last link between eastern Europe and the Holy See was severed in July with the expulsion by the Rumanian government of the regent of the nunciature in Bucharest, Mgr. Gerald Patrick O'Hara. Czechoslovakia closed its legation at the Holy See in April. There was left a regent of the nunciature, Mgr. Joseph Patrick Hurley, in Yugoslavia (outside the orbit of the Cominform); but though from that country there came many reports of improving relations between the state and the Roman Catholic Church, there was little or nothing to give colour to them.

In Eastern Germany the year was one of increasing difficulties, although Mgr. Petrus Legge, bishop of Meissen in Saxony, the only Catholic bishop whose see was in the Soviet zone of Germany, was able for the

first time since the end of World War II to attend the annual conference of the German bishops at Fulda in August. Cardinal Konrad von Preysing, bishop of Berlin (d. Dec. 21; *see* OBITUARIES), had resisted pressure and never hesitated to take the initiative: in January he denounced the concentration camps still existing in Eastern Germany; in February he forbade his clergy to associate themselves with the National Front which, under Communist inspiration, was calling loudly for the unification of the Reich; on Passion Sunday he called on the parents of Berlin to redouble their efforts in defence of the Catholic schools; and on April 23, in a letter to Otto Grotewohl, the East German premier, he recapitulated the causes for complaint on which, throughout the year, he continued to insist. In Austria the chief event of interest was Franz Jachym's refusal at the last moment, on April 23, to accept consecration as successor-designate to Cardinal Theodor Innitzer, archbishop of Vienna (he was, however, consecrated in Rome on May 20).

In France the bishops made two major collective utterances: in March, on the industrial unrest and its causes; and in June, on the speciously worded Stockholm peace appeal of the Communists, which was a source of some embarrassment for Catholics not only in France but in Italy and other countries as well. The main source of public controversy in France was again the confessional schools; and on Sept. 29 the French cabinet, on the proposal of the minister of education, P. O. Lapie, announced the appointment of a special governmental commission including a number of distinguished Catholic representatives to enquire into the whole problem.

The first plenary council of the Catholic Church in India, with Cardinal Norman Thomas Gilroy, archbishop of Sydney, presiding as papal legate, took place in Bangalore in January. An agreement between Portugal and the Holy See, signed in Rome on July 18, revised the arrangements by which the Portuguese government had previously had a voice in filling certain sees in Indian territory that once came under Portuguese influence, notably the archdiocese of Bombay. In China missions met with increasing difficulties, and the Catholic university of Fu Chen in Peking was closed in October. Pope Pius XII, by a Roman decree dated May 30, established the hierarchy in British West Africa and the British mandated territories of Togoland and the Cameroons.

(M. DK.)

United States. The bishops of the United States, at their annual meeting, issued a statement stressing the urgency of religion in child upbringing and condemned world apathy toward religious persecution behind the "iron curtain." The National Catholic Education association held its 47th annual convention in New Orleans in April. The theme of the meeting was "Education for International Understanding." In March the National Catholic Conference on Family Life met for the 18th annual convention in Detroit, Michigan. The Catholic Press association, at the 40th annual convention in Rochester, New York, condemned the Communist conquest of China and called on "all religious-minded persons, irrespective of creed, to unite in a world-wide religious front against secularism, totalitarianism and all their evils." The 36th annual meeting of the National Conference of Catholic Charities was held in Washington; the 28th convention of the National Catholic Rural Life conference in Belleville, Illinois, and the 68th annual meeting of the Knights of Columbus in New York.

The world population of Roman Catholics exceeded 400 million. In the United States, including Hawaii and Alaska, it was estimated at 27,766,141. The number of U.S. dioceses was increased to 102 when the new diocese of Worcester, Massachusetts, was created. There were 23 arch-dioceses and the vicariate-apostolic of Alaska. Parishes totalled 15,292 and there were 42,970 priests, 7,377 brothers and 147,310 nuns.

In January Myron C. Taylor resigned as President Truman's personal envoy to the pope after ten years of service. (*See* also HOLY YEAR; PIUS XII; VATICAN CITY STATE.)

(J. LA. F.)

ROME. Capital and largest city of Italy. Area: 38·6 sq.mi. Pop. (1936 census) 1,150,589, (1950 est.) 1,700,804. Mayor, Salvatore Rebecchini.

In connection with the Holy Year (*q.v.*) Rome expected some five million pilgrims, but only three million came and two-thirds of them were Italian. The proprietors of Roman hotels and restaurants were disappointed, blaming the "cold war," the "iron curtain" and the currency regulations. Still, three million pilgrims was ten times the number of the Holy Year of 1900. Another reason for bad temper among the hoteliers was the gift of £1 million by the Economic Co-operation administration for building and equipping pilgrims' hotels and hostels with food and lodging at non-profit prices. Of course, no amount of E.C.A. aid could compensate these pilgrims who fell victims to the *borsaiuoli* (bag snatchers), famous for their dexterity. All the same, for the Holy Year Rome became the cleanest city of Italy.

The decoration of the Spina di Borgo, the avenue leading to St. Peter's basilica, with a double row of 28 obelisks, aroused many protests, but all Romans were proud of their new central railway station, a beautiful stone building (with a rubber floor in the main hall). The new station was built further back than the old Stazione Termini (the only victim of a single Allied air raid on Rome), and the new station's square became the largest in Europe.

The F.A.O. (Food and Agriculture organization) established its headquarters in Rome, taking over the building of the former Italian Ministry of Colonies. Carlo Alberto Salustri, the poet of Rome, better known as Trilussa, who was appointed life senator in 1948, died on Dec. 21 at the age of 79.

Among the most prominent visitors of the year were Princess Margaret Rose; the Duke and Duchess of Windsor; ex-King Leopold and his wife; Prince Henry d'Orléans, Count of Paris; and Cardinal Adam Sapieha, the only cardinal behind the "iron curtain" and the only bishop from Soviet satellite countries allowed to visit Rome. (*See* also VATICAN CITY STATE.)

(L. FI.)

ROOT CROPS. The wet summer of 1950 favoured the growth of root crops in Great Britain, and potato and sugar beet yields per acre were the highest for several years.

ROOT CROPS IN GREAT BRITAIN*

	Acreage (thousand acres)			Production (thousand tons)		
	1939	1949	1950	1939	1949	1950†
Potatoes	704	1,308	1,240	5,218	9,035	9,367
Sugar Beet	345	421	429	3,529	3,962	4,739
Carrots	17	33	32			
Onions	2	9	7			

* SOURCE: Ministry of Agriculture. † Based on estimates of yield as at Sept. 1.

The acreage under potatoes in 1950 was 5% less than that in the preceding year, probably for the most part because of the difficulty of finding labour for harvesting. The average yield per acre was about 9% more in 1950 than in 1949, considerably outweighing the decrease in acreage. The harvest was an anxious one, as weather and soil conditions were unfavourable and labour scarce, even of schoolchildren. The wet season favoured blight attack, with the risk of damage in storage. Constant watch was kept for the Colorado beetle in southern England, but the numbers found caused no special anxiety. On the continent, however, the infestation was extremely bad. The average price of potatoes in the year 1949-50 was 214*s.* 6*d.* a ton; it had been 206*s.* 3*d.* a ton in 1948-49 (these prices include an allowance for an acreage payment).

The sugar beet crop was a record for total tonnage and was expected to yield about 560,000 tons of sugar (approximately equal to the record out-turns of 1946 and 1948) by the early months of 1951. Preliminary observations showed the average weight per root to be about one-third greater than in 1949 and the average weight of sugar per root to be about one-quarter greater. About 11% of the crop for 1949-50 was harvested mechanically (*cf.* 3½% of the crop for 1948-49). In Scotland about 28% of the crop for 1949-50 was machine-harvested; and still more machines were expected to be working in 1951. The average price of sugar beet in 1949-50 was 104*s.* 11*d.* a ton (*cf.* 108*s.* 8*d.* a ton in 1948-49). Though basic prices had been increasing in recent years the low sugar percentage of the 1949 crop resulted in a fall in actual return per ton for the farmers. (K. E. H.)

ROTARY INTERNATIONAL. During 1950 the number of Rotary clubs in Great Britain and Ireland increased from 668 to 685 and the number of Rotarians from 30,261 to 30,700. From January to June Rotarian Arthur Mortimer, of St. Pancras, London, was completing his year of office as president of Rotary International in Great Britain and Ireland. He was succeeded by Rotarian Canon T. H. Cashmore, of Wakefield, Yorkshire, who was nominated at the annual conference held at Bournemouth, Hampshire, from April 28 to May 2 and attended by more than 4,000 delegates; he was elected at the convention of Rotary International held at Detroit, Michigan, in June.

Many Rotary clubs continued their study of the problems of industrial relations and of the possibilities of assisting young entrants into industry and in this they were encouraged by the Ministry of Labour and National Service, which drew the attention of local officers to the ways in which Rotary could co-operate in vocational guidance. Rotary clubs also studied the work of the specialized agencies of the United Nations and in some cases gave practical help in employing displaced persons from Europe. It was possible, too, to mitigate the discomforts of the refugees in the European camps.

Eleven young men and one young woman nominated by Rotary clubs in Great Britain and Ireland were awarded Rotary foundation fellowships by Rotary International, enabling them to undertake one year's post-graduate study; 18 graduates from the U.S., Hawaii and the Commonwealth travelled to British and Irish universities under this scheme.

C. R. Hewitt's *Towards my Neighbour* (London, 1950) described the social influence of the Rotary clubs in Great Britain and Ireland. (F. C. H.)

ROWING. The rowing season of 1950 was as unkind, from the point of view of weather, as the previous year had been kind. But it was none the less notable for the strongest foreign challenge ever known at Henley and for the strongest British representation ever sent abroad.

The British Empire Games Regatta. The regatta, the first event of the year, was held at Lake Karapiro, 100 mi. south of Auckland, New Zealand. The eights were won by Australia (6 min. 27 sec.) with New Zealand one foot behind and England (6 min. 40 sec.) third. The single sculls were won by Australia (M. T. Wood; 7 min. 46·9 sec.), followed by England (A. D. Rowe; 7 min. 54 sec.), South Africa (I. R. G. Steven; 8 min. 3 sec.) and New Zealand (T. Hegglun; 8 min. 4 sec.). The double sculls were won by Australia (M. T. Wood and M. S. Riley), with New Zealand (D. Simonson and J. Schneider) 2 lengths behind and England (J. Brown and K. W. Tinegate) 2½ lengths behind New Zealand. The pairs were won by Australia (W. J. Lambert and J. W. Webster; 7 min. 58 sec.), with New Zealand (H. Gould and D. Gould; 8 min. 10 sec.) second. The coxed fours were won by New Zealand, with Australia 1½ lengths behind.

The Universities. The university boat race was won by Cambridge (3½ lengths; 20 min. 15 sec.). Oxford lost their stroke and president, C. G. V. Davidge, in training and were thought to have little chance, whilst Cambridge promised to be the finest crew for many years. But in the end Oxford improved greatly, whilst Cambridge's early promise was not fulfilled; so that Oxford, with the advantage of the Surrey station, were able to make a good race of it. The crews were: Cambridge, H. H. Almond (bow), D. M. Jennens, A. L. Macleod, P. M. O. Massey, W. T. Arthur, E. A. P. Bircher, C. B. M. Lloyd, J. L. M. Crick (stroke) and A. C. R. Armstrong-Jones (cox); Oxford, J. G. C. Blacker (bow), P. Gladstone, H. J. Renton, J. Clay, G. C. Fisk, J. Hayes, D. N. Callender, A. J. M. Cavenagh (stroke) and J. E. C. Hinchliffe (cox).

At Cambridge, Lady Margaret (St. John's) achieved the remarkable distinction of making four bumps to finish head of the river. At Oxford, New college went ahead after bumping Magdalen and Trinity, who had created a record by remaining head for six years.

Henley Royal Regatta. The regatta was chiefly remarkable for a record foreign entry of 22 (representing seven countries) and for the fact that five foreign crews were entered for the Grand. A. D. Rowe, in winning the Diamond sculls, was the first Englishman to do so since 1933. Their strongest rivals, Verese (Italy), having failed to start, Harvard university won the Grand fairly comfortably. The four-oared events were remarkable for poor steering, which led to a number of crews hitting the booms.

Grand challenge cup: Harvard university (U.S.) beat Studenten Roiervereeniging Njord (Netherlands), 1¼ lengths, 7 min. 23 sec.
Ladies plate: New College, Oxford, beat Trinity college, Dublin, ½ length, 7 min. 25 sec.
Thames cup: Kent school (U.S.) beat Thames R.C. "B," 2½ lengths, 7 min. 34 sec.
Princess Elizabeth cup: St. Paul's school beat Bedford school, 1 length, 7 min. 44 sec.
Stewards' Challenge cup: Hellerup Roklub (Denmark) beat Leander, 4 lengths, 8 min. 3 sec.
Visitors' challenge cup: Lady Margaret B.C. "B," Cambridge, beat Emmanuel college, Cambridge, 3 lengths, 8 min. 8 sec.
Wyfold Challenge cup: Royal Engineers beat Royal Air Force, 1½ lengths, 8 min. 13 sec.
Silver goblets: J. Rosa and C. van Antwerpen (Belgium) beat J. H. Pinches and E. Sturgess (London R.C.), ¼ length, 9 min. 10 sec.
Double sculls: E. W. Parsner and A. Larsen (Denmark) beat J. B. Brown (Loughborough R.C.) and K. W. Tinegate (Birmingham R.C.), easily, 8 min. 21 sec.
Diamond sculls: A. D. Rowe (Leander) beat R. van Mesdag (Trinity college, Dublin), 3 lengths, 9 min. 11 sec.

The Wingfield sculls (amateur sculling championship of the Thames, were won by E. Sturges (London R.C.; 22 min. 7 sec.), 4 lengths ahead of H. J. Renton (Magdalen college, Oxford). P. N. Carpmael (London R.C.), the previous holder, was third.

The European Championships. These were held at Idroscalo, Milan, an English eight taking part for the first time. Italy won the eights (6 min. 17·3 sec.), the coxwainless fours (6 min. 50 sec.) and the coxed pairs (7 min. 39·1 sec.); Denmark the coxed fours (6 min. 50·2 sec.) and the single sculls (E. Larsen; 7 min. 25·7 sec.); and Switzerland the coxwainless pairs (7 min. 17·5 sec.).

The Philadelphia Gold cup. This is the world amateur sculling championship. The holder, M. T. Wood (Australia) was challenged by J. B. Kelly (U.S.) and A. D. Rowe (Great Britain), and a race took place at Philadelphia in September. Rowe led off the start, followed by Kelly; but all three scullers were overlapping at the half mile. At the three-quarter mile Kelly led by ¼ length over Wood, with Rowe a little over a length behind. Wood however managed to get past to retain his title. Result: Wood, 7 min. 14 sec.; Kelly 7 min. 19 sec.; Rowe, 7 min. 21 sec. (R. D. B.)

ROYAL AIR FORCE. The air estimates for the financial year 1950-51, as originally presented, amounted to £223 million, an increase of £15,550,000 on the year 1949-50. On Oct. 1, 1950, the strength of the Royal Air Force stood at 198,100 (including the Women's Royal Air Force). Of these, 70,000 were national service men. There were, in addition, 9,500 men in the R.A.F. Volunteer Reserve and 7,100 in the Royal Auxiliary Air Force. In December, supplementary estimates were published, making provision for an increase in strength of 243,000, the main reason being the extension of national service from 18 months to two years.

On Jan. 1, 1950, Air Chief Marshal Sir John Slessor (*q.v.*) assumed the office of chief of the air staff in succession to Marshal of the Royal Air Force Lord Tedder, who was appointed head of the British combined services committee at Washington. Sir John Slessor was himself promoted marshal of the Royal Air Force in June.

On March 1, a reorganization of the air staff took place. This was made necessary by the increased responsibilities imposed by the North Atlantic and Brussels treaties and by the additional training problem following the introduction of jet aircraft. The air staff was now divided into two main branches, one under the vice chief, Sir Ralph Cochrane, being specially concerned with strength and fighting efficiency, the other under the deputy chief, Sir Arthur Sanders, dealing with inter-service policy and planning and with co-operation with commonwealth and allied air forces. Both the vice chief of the air staff and the deputy chief were members of the air council.

Considerable modifications also took place in the administration of the Royal Air Force in the United Kingdom. To allow operational commands to concentrate more completely on their primary role, Reserve command took over a number of duties and the control of certain units previously administered by other commands or by the Air Ministry. Re-christened Home command, it was reorganized on a regional basis, the regional groups corresponding with the army commands with which they were jointly responsible for regional defence.

A much simplified trade structure involving a new grouping of allied trades was introduced during the year. Agreements were reached with the Amalgamated Engineering union, the Electrical Trades union and certain others to accept regular R.A.F. men as members on leaving the service, provided they had completed specified qualifying periods in their service trades. The new classification of non-commissioned air crew which was adopted after World War II. and which had not proved a success, was abandoned in favour of a reversion to the traditional service ranks of sergeant and flight sergeant, with the name of the particular air crew category added; *e.g.*, flight sergeant gunner. The Royal Observer Corps, which did such valuable work for the Royal Air Force during World War II celebrated its 25th birthday in April. It had a strength of 13,000 men and 2,000 women.

For the first time since 1937, the Royal Air Force display was revived in July. Increased aircraft speeds having made Hendon unsuitable for the purpose, the exhibition took place at Farnborough on two successive days. The air forces of the United States, France, Belgium and the Netherlands all co-operated, as well as those of six Commonwealth countries. To ensure uniform training and efficiency among Western Union air forces, a combined examining squadron was formed. It was intended that it should be stationed for a year at a time in each of the constituent countries, beginning with the United Kingdom. Already international co-operation had been advanced by the adoption of British methods of control and of English as the common radio-telephone language. Both were successfully tried out in the Western Union air defence exercise held under the control of Air Chief Marshal Sir James Robb, commander in chief Western Union air forces, in August. (*See* AIR FORCES OF THE WORLD.) (D. CR.)

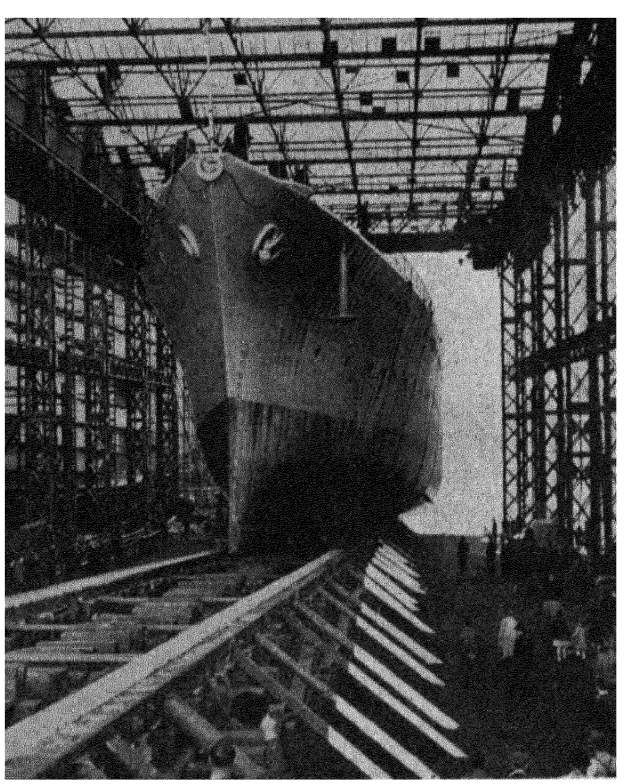
ROYAL NAVY. The year opened with the tragic loss of the submarine "Truculent" in the Thames estuary in collision with the Swedish ship "Divina" as she was returning from trials after refit, with the loss of 46 of her crew and 16 civilian dockyard workers.

The following important appointments were made: Admiral Sir J. Edelsten to be commander in chief, Mediterranean; Vice Admiral A. C. G. Madden to be second sea lord; Rear Admiral Earl Mountbatten to be fourth sea lord; Vice Admiral (E) D. C. Maxwell to be engineer in chief of the fleet; Lieutenant the Duke of Edinburgh to the "Magpie" in command.

The naval estimates for 1950-51 amounted to £193 million, an increase of £3,750,000 over those of the previous year. Increased provision was made for reserves and non-effective services, but active service personnel were to be reduced by 16,500 by the end of the year. The saving was chiefly on the intake of national service men, but two battleships and one cruiser were paid off into reserve and the marine headquarters at Chatham was closed. The North American squadron was in future to be supplied from the home fleet, which permitted the closing down of Bermuda yard. New building was to be at a standstill but a small programme of reconstruction was approved. The emphasis was to be on training and research work, with special regard to anti-submarine training.

In order to meet a deficiency of junior officers 50 young officers from the Royal Naval reserve and Royal Naval Volunteer reserve were granted permanent commissions in the Royal Navy.

There was a serious loss of the most experienced and highly skilled men in the navy owing to a heavy falling off in the number of senior ratings re-engaging to complete time for



The launching of the destroyer H.M.S. "Diamond" in 1950. She was of the Daring class and her armament would include six 4·5-in. guns.

pension. The authorization of new rates of pay for all three services had a good effect on recruiting, but it was problematical whether that in itself would induce many senior ratings to re-engage without corresponding improvement in pensions. With the extension of the period of service for conscripts to two years they would presumably be eligible to serve abroad. The general opinion in the navy appeared to be that they would be, on the whole, excellent material.

The Women's Royal Naval service was established as a permanency and it was decided to employ W.R.N.S. air mechanics in naval air stations.

Experimental work included landing "Vampire" jet fighters by night on an aircraft carrier, and testing the ability of men to survive in severe cold. Cliff-scaling by night by marine commandos, and cruises and exercises for R.N.V.R. divisions and air squadrons was included in training.

A feature of the usual fleet exercises was the inclusion of ships of other North Atlantic treaty powers in the training of the Home and Mediterranean fleets.

Two new blocks of buildings were taking shape at the Royal Naval Engineering college at Manadon, near Plymouth, the beginning of a naval university for mechanical engineering. The programme of building of naval married quarters made progress. A large block of flats was opened at Malta.

Emergency measures to meet the requirements of the United Nations in view of the invasion of South Korea necessitated bringing the crews of the ships in far eastern waters up to war strength and the speeding up of new construction. Two anti-submarine frigates of new design and 41 new design mine sweepers were ordered. (*See* also NAVIES OF THE WORLD.). (R. N. BA.)

RUANDA AND URUNDI: *see* BELGIAN COLONIAL EMPIRE; TRUST TERRITORIES.

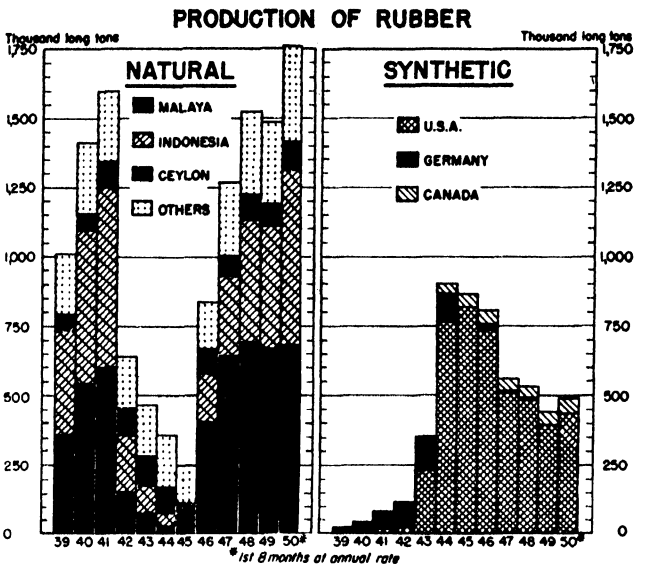
RUBBER. One of the most remarkable features of rubber during 1950 was the wide fluctuation in its price. At the beginning of the year rubber was sold in London at 1*s.* 3*d.* a pound, but towards the end of the year as much as 5*s.* 11*d.* was bid and paid. The most important influence on the price of natural rubber and the cause of the decision to begin synthetic production again was the intervention by the United Nations in the Korean dispute.

At the end of the year, there was much discussion about a proposed rubber duty in Malaya to contribute towards the rising costs of measures against the banditry which had been such a serious menace to Malayan rubber production since 1948. The original proposals were regarded by the producing industry as too severe and a new series of scales were quickly introduced.

In the United States, Great Britain, France and the Netherlands experimental work on the incorporation of rubber in various forms (principally as a powder) with bitumen for road surface construction was carried out on a much larger scale than before; it was suggested that if this process were to prove as successful as the experimental results indicated, road construction might well become second only to the tyre industry in the consumption of natural rubber.

Following the proclamation of independence Indonesia as a producer of rubber became something of an enigma; but during 1950 output again increased, and towards the end of the year previous levels were surpassed and that country once again became one of the world's major producers. In Indo-China, planters continued to work in spite of continued guerrilla warfare.

The International Rubber Study group met in April in Brussels and discussed various problems concerning world production and consumption. According to the statement



issued after the meeting, the subjects discussed included the position of natural rubber producers as well as the social and economic conditions in the producing countries. Among other matters discussed during the meeting were developments in the natural and synthetic rubber industries and the grading and packaging of rubber. Considerable work was done during the year in Great Britain, France and Malaya in an attempt to find a satisfactory method of producing standards for the technical classification of natural rubber, in answer to the demand from manufacturers, particularly in the U.S.

Development work by the various bodies established by rubber producers in various parts of the world—the British Rubber Development board, the Institut Français du Caoutchouc and the Rubber Stichting—was carried on at a far higher level than previously. So far as English-speaking countries, including the U.S., were concerned, development work carried out by the British Rubber Development board through its various offices in the Commonwealth and through the Natural Rubber bureau, its office in Washington, was guaranteed on a long term basis from Jan. 1, 1950. This guarantee was embodied in a three-part scheme financed by

TABLE I. WORLD CONSUMPTION OF NATURAL RUBBER
(long tons)

	U.S.	U.K.	France	Germany	Canada
July 1949	40,434	14,080	7,190	5,025	2,452
Jan. 1950	59,992	20,011	8,542	5,995	3,608
Feb.	56,580	17,211	8,708	5,413	3,690
March	60,859	17,445	5,491	5,606	3,916
April	57,914	19,143	5,866	4,882	3,477
May	63,813	16,697	8,481	5,494	3,588
June	63,333	17,641	9,493	6,049	4,041

TABLE II. CONSUMPTION OF SYNTHETIC RUBBER
(GR-S or Buna S, Neoprene, Butyl, Nitrile rubbers)
(long tons)

	U.S.	U.K.	France	Germany	Canada
July 1949	30,094	179	599	224	1,160
Jan. 1950	33,966	234	724	249	1,527
Feb.	31,860	220	691	216	1,630
March	37,647	229	346	223	1,683
April	38,075	234	335	175	1,640
May	46,398	211	610	250	1,837
June	48,608	226	674	298	1,817

the rubber producers of Malaya. The requisite funds were raised by a cess or levy on all rubber exported from the Federation of Malaya and Singapore, for research and development work under the auspices of the Rubber Research Institute of Malaya, the British Rubber Producers' Research association and the British Rubber Development board. The Rubber Research Institute of Malaya was directing its

activities towards improving and maintaining the standard and quality of rubber grown and exported from Malaya. The British Rubber Producers' Research association continued its work of fundamental research into the uses and improvement of rubber; and the British Rubber Development board devoted itself to promoting new and existing uses of rubber. In Great Britain, development work was intensified; attention was given to the use of rubber in the form of latex foam as an upholstery material.

The year proved to be one of record consumption and production—the world consumption being approximately 1·7 million tons and world production 1·8 million tons. The Malayan contribution to this was approximately 700,000 tons and that of Indonesia some 677,000 tons, both of these figures representing record outputs. Ceylon and Indo-China, the two other major producers had very successful years producing 118,525 tons and 51,535 tons respectively. The rest of the world produced just over 250,000 tons of plantation rubber; the grant total for the year was 1,705,978 tons. Brazil, which had at one time been the only producing country, contributed 24,700 tons to the world grand total for all types of natural rubber of 1,779,528 tons. The world production of synthetic rubber in 1949 was 440,332 tons, of which 410,932 tons were produced in the U.S.; in 1950 the U.S. alone produced 475,984 tons. (C. Bd.)

United States. During 1950 New York natural rubber spot prices fluctuated from about 18 cents (Jan. 16) to 86 cents (Nov. 8) a pound. The new supply of natural rubber for the U.S. up to the end of Sept. 1950 was 584,479 long tons as compared with 478,421 long tons for the same period in 1949. The invasion of South Korea, on June 25, led to scare-buying of finished products by consumers and to heavy purchases of the raw material for the U.S. strategic stockpile and by foreign manufacturers for stock. Heavy purchases of rubber by the U.S.S.R. and large shipments to Chinese ports which may have been destined for Soviet consumption increased the demand.

On Dec. 28 it was announced in Washington that the U.S. government would become the sole importer and distributor of all natural rubber and natural rubber latex used in the U.S., and that the General Services administration, the U.S. government's procurement agency, would in future allocate the required amounts to the defence stock-pile and re-sell the remainder of the product to industry.

Natural Rubber. In 1949, U.S. consumption had been 674,522 long tons of natural and 414,381 long tons of synthetic rubbers, a total of 988,903 tons. November estimates indicated a record total consumption in 1950 of 1·24 million tons. Net imports of natural rubber latex into the U.S., from January to the end of June 1950, were 23,015 tons dry rubber content.

Synthetic Rubber. The general purpose synthetic rubber (GR-S) produced in U.S. government plants in Jan. 1950 was only 18,124 tons, the lowest output since the plants were started in 1943. With crude rubber available at 18 cents a pound, the level market price of 18·5 cents a pound for GR-S gave manufacturers no great incentive to increase the use of man-made rubber. It was not apparent until the spring of 1950 that the industry would require more new rubber than in any previous year.

On June 12 congress extended operation of the Rubber Act of 1948 to June 30, 1952, largely because of the "obvious Communist control of rubber-producing countries." On July 7 the government authorized the reopening of one GR-S plant, one Butyl production unit and one butadiene plant. Three weeks later additional facilities sufficient to bring the total output of GR-S and Butyl up to 675,000 tons a year were ordered to be reopened. On Sept. 13 the reopening of all remaining government facilities, including those plants which derived butadiene from alcohol, was directed. In December the Reconstruction Finance corporation announced that the prices of synthetic rubber were to be advanced from 18·5 cents a pound to 20·75 cents a pound for Butyl and to 24·5 cents a pound for GR-S.

Tyres and Inner Tubes. More than 8 million new cars were made in 1950 in the United States, and replacement deliveries of tyres were unusually heavy. It was estimated at the end of the year that about 250 million tyres were in service. Total U.S. deliveries of tyre covers during the year ended July 30, 1950, were 89,013,000 (75,819,000 car and 13,194,000 lorry and bus tyres). During the year brisk buying of automotive rubber goods was accompanied by four price increases for car outer covers, and five increases in the prices of lorry and bus tyres. Despite these price advances and an active market throughout the year, there was a spurt of scare-buying of tyres during July and August. (H. L. T.)

RUGBY FOOTBALL: *see* Football.

RULERS, SOVEREIGNS AND PRESIDENTS: *see* Sovereigns, Presidents and Rulers.

RUMANIA. People's republic of southeastern Europe, bounded N. and N.E. by the U.S.S.R., E. by the Black sea, S. by Bulgaria and W. by Yugoslavia and Hungary. Area: (1939) 113,889 sq.mi.; (1947, without Bessarabia, northern Bukovina and southern Dobruja) 91,671 sq.mi. Pop.: (1939 est.) 19,933,800; (Jan. 25, 1948, census) 15,872,624. Language (1948 census): Rumanian 85·7%, Hungarian 9·4%, German 2·2%, Yiddish 0·9%, other 1·8%. Religion (1947 est.): Greek Orthodox 81%, Greek Catholic 9%, Roman Catholic 7%, other 3%. Chief towns (pop., 1945 est.): Bucharest or Bucureşti (cap., 1948 census, 1,401,807); Cluj (110,956); Jassy or Iaşi (108,987); Timişoara (108,296); Ploeşti (105,114); Brăila (97,292); Galaţi (93,229). Chairman of the presidium of the Grand National Assembly, Constantin Parhon; prime minister, Petre Groza.

History. On March 16, 1950, a government reshuffle led to the appointment as vice premiers of Teohari Georgescu (*q.v.*), Iosif Chişinevschi (Kishinevsky) and Chivu Stoica. All three were prominent and veteran Communists. Georgescu was an expert in police affairs, Chişinevschi in education and propaganda, Stoica in industrial and trade union matters.

The "verification" of membership of the Communist party, which began in 1949 and continued into 1950, resulted in the removal of 192,000 members, or 20% of the party's strength. After it was concluded, the party had 720,000 members. According to an official statement at the end of July 1950, the party was to make greater efforts to recruit industrial workers. The aim for two or three years was to ensure that 60% of the party's members should be workers. In future the conditions of admission to the party were to depend on the candidate's social origin. Four-fifths of all new candidates must be workers. A worker in heavy industry would have a period of probation of only six months, and would need to be recommended by two party members who had been in the party not less than three years. For workers in other branches of industry, at machine-tractor stations and on state farms, and for members of collective farms, agricultural labourers and working peasants the period of probation was to be one year, and there must be three sponsors who had been in the party not less than three years. For members of other social classes the period of probation would be one and a half years, and there must be four sponsors all of whom had been party members for not less than four years. It was also stated that during the past year 249,000 party members had attended courses of instruction in party training centres and that in the coming year 324,000

persons would do so. Among the training centres mentioned was the A. A. Zhdanov High School of Social Sciences.

On Sept. 6 a new law was passed on the administrative divisions of the country. Many of the old counties, which had arisen for various historical reasons and did not represent economic units, were abolished In the place of 58 provinces and 424 districts, 28 regions subdivided into 177 districts were created. The new subdivisions resembled those in the Soviet Union. The principles of integration of local with central authority and of the responsibility of each administrative unit, not only to its own electors and population but also to the administrative unit at the level above it, were also stressed. It seemed unlikely that the reorganization would have much importance, as the old units were in fact as completely controlled by members or nominees of the Communist party as the new units would be. Its significance was perhaps as a symptom of the growing subordination of the country to Soviet models, formal as well as real.

Collectivization of agriculture had not yet gone far. The first Rumanian collective farm was set up on July 24, 1949. A year later there were 670, and by mid-September there were about 1,000. (*See* also PEASANT MOVEMENT.)

It was officially claimed that the economic plan for 1949 had been achieved to the extent of 108%. Production of tractors was claimed to have been double the proposed target, of steel 27% above the target, and of crude oil 9% above. It was also stated that the land held by state farms had been more than trebled (from 220,000 ha. to 720,000 ha.). The targets for the 1950 plan showed a proposed increase over 1949 output of oil by 32%, of electric power by 13%, of steel by 19% and of machinery by 40%. The number of machine-tractor stations was to increase by one-third, and of tractors in them by one-half. In March 1950 a number of criticisms of the Baia Mare mines by a committee of investigation were published. Health services and educational facilities for the miners were insufficient, and technical methods were backward. One of the management's faults was failure to popularize Soviet methods. The Stakhanovite system however was certainly pushed ahead in Rumanian industry as a whole. A State Planning commission report of July 28 stated that in the second quarter of the year 67% of all industrial workers had been engaged in "Socialist competition."

A law for the nationalization of all house property belonging to landowners, business men, bankers and any of the exploiting class was a further blow against the remnants of the old middle class. The vagueness of its phrasing enabled the government to interpret it as it wished. Removal or damage to any object in the property before the authorities took it over was to be punishable by imprisonment for 5 to 10 years.

The Rumanian government closed the British and U.S. information offices in March 1950. Already before this Rumanian personnel employed in these offices had been threatened, and in some cases arrested and maltreated, by the political police. At the end of April another spy trial was staged. An employee of the British information office, Miss Samuelli, was sentenced to 20 years' imprisonment. The well-known newspaper editor, Liviu Nasta, was among the accused at the trial, and also received a 20-year sentence. In July another spy trial was held, which "implicated" the Turkish legation and the papal nunciature. In August there was a trial of Yugoslavs accused of espionage on behalf of Tito. On Oct. 23 another spy trial included four French subjects, who received long prison sentences.

An official statement of Oct. 25 declared that since the liberation 1,870 Russian books had been translated into Rumanian and published by the state firm Cartea Rusă in 30 million copies. Of this total, 4,700,000 copies were of 112 works by Lenin and Stalin.

The mediaeval Saxon city of Kronstadt, built in the fold of the Carpathians at their southeast corner in the 13th century, which under Rumanian rule after 1918 was rechristened Braşov and became the centre of an important industry, received a new honour. On Aug. 22 it was announced that in response to a request by the workers of its railway workshops the Rumanian government had consented to its being renamed "Stalin." (*See* also EASTERN EUROPEAN ECONOMIC PLANNING.) (H. S.-W.)

Education. Schools (1949-50): elementary, pupils 1,790,000; secondary, pupils 224,000; higher education, students 48,500. Illiteracy (1948) 23·1%.

Agriculture. Main crops ('000 metric tons, 1947; 1948 in brackets): wheat 1,279 (2,600); maize 5,279; barley 364; oats (1946) 280; rye 66; potatoes (1948; 1949 in brackets) 1,225 (1,090); sugar, raw value 112 (112). Livestock ('000 head): sheep (Dec. 1948) 7,300; pigs (March 1947) 1,406; cattle (Dec. 1947) 3,048; horses (Dec. 1948) 939.

Industry. Industrial establishments (1947): 28,295; persons employed 462,305. Fuel and power (1938; 1947 in brackets): coal ('000 metric tons) 299 (162); lignite ('000 metric tons) 2,097 (2,108); natural gas (million cu. m.) 1,860 (2,106); electricity (million kwh.) 568 (712); crude oil ('000 metric tons, 1949; 1950, six months, in brackets) 4,500 (2,350). Raw materials ('000 metric tons, 1938; 1947 in brackets): pig iron 133 (91); steel 277 (183); lead 5·8 (3); zinc 3·6 (2); gold (kg.) 4,912 (2,231); silver ('000 fine troy oz.) (481). Manufactured goods ('000 metric tons, 1946; 1947 in brackets): refined petroleum products 3,850 (3,450); cotton yarn 12·5 (11·3); cotton fabrics 4·5 (3·2); cement 373 (418).

Foreign Trade. (Million U.S. dollars, 1948) import 96; export 160.

Transport and Communications. Roads (1945): 43,163 mi. Licensed motor vehicles (Dec. 1949): cars 14,000; commercial vehicles 12,000. Railways (1949): 7,363 mi. Shipping (1948): merchant vessels 15; total tonnage 32,962. Telephones (1949): 135,000.

Finance and Banking. (Million lei) budget: (1950 est.) revenue 353,880, expenditure 350,680. Currency circulation (July 1948) 32,000. Monetary unit: *leu* (pl. *lei*) with an official exchange rate of L. 430 to the pound and L. 153 to the U.S. dollar.

See A. Gould Lee, *Crown Against Sickle: The Story of King Michael of Rumania* (London, 1950).

RUSSELL, BERTRAND ARTHUR WILLIAM RUSSELL, 3rd Earl, British philosopher, mathematician and sociologist (b. Trelleck, Monmouthshire, May 18, 1872), was educated privately and at Trinity college, Cambridge. (For his early career and an account of his philosophical and mathematical theories see *Encyclopædia Britannica.*)

In 1944 Russell returned from the United States, where he had been lecturing at various institutions since 1938, and was elected to a fellowship of his college for the second time. In 1946 *A History of Western Philosophy* was published; he had been engaged in writing this comprehensive work for many years. In late 1948 and early 1949 he gave the first series of Reith lectures, which had been initiated by the B.B.C. and were broadcast in its Third programme; his subject for the six lectures was "Authority and the Individual." In March 1949 he received the degree of doctor *honoris causa* from the University of Aix-Marseilles, France, and in the Birthday Honours in June of the same year was awarded the Order of Merit. In Nov. 1950 he was awarded the Nobel Prize for Literature "in recognition of his many-sided and important work in which he had constantly stood forth as a champion of humanity and freedom of thought." Also in 1950 his *Unpopular Essays* were published.

RUSSIA: *see* UNION OF SOVIET SOCIALIST REPUBLICS.

RUSSIAN LITERATURE. Literature in the Soviet Union continued to suffer from creative drought in 1950. In thought control, the Zhdanov era, inaugurated in 1946, had left all earlier restrictions on artistic creation far behind. If the campaign against "homeless cosmopolitans" abated in 1950, it was because by the end of 1949 all non-conformists had either been silenced or made to toe the line. The stress was therefore shifted to attacks on the "enemies" of the Soviet Union. Most of the older Soviet writers were either

silent or actively engaged in the campaign against " American warmongers " and in the defence of the Soviet version of world peace. *Literaturnaya Gazeta*, the official organ of the Union of Soviet Writers, had completely lost its literary character and served almost exclusively the cause of Communist political propaganda.

Among individual works by well-known Soviet writers may be mentioned Fyodor Gladkov's *Volnitsa* (*Freebooters*), a sequel to his autobiographical *Tale of My Childhood.* Like Maxim Gorky's autobiographical series, which it resembled, it seemed likely to remain the author's most memorable work. Mikhail Slonimsky's novel *Inzhenery* (*Engineers*) was inferior to most of his earlier works. None of the newcomers to literature were likely to be remembered for work published in 1950. Obeying the party line, most of the writers concentrated on the portrayal of the heroic features of Soviet life (in which the cult of Stalin played an ever-growing part) or on the unmasking of the " warmongers." In poetry the only notable event was a new translation of Goethe's *Faust* by Boris Pasternak, criticized by some Communist pundits for a tendency to read into Goethe his own mood or romantic disillusionment. The reappearance of Anna Akhmatova, who was hounded off the literary stage in 1946, with a series of poems glorifying Stalin and the Soviet Union as the only champion of peace, was of psychological rather than literary interest.

Outside the U.S.S.R. the most notable event was the book *Vospominaniya* (*Memoirs*) by the octogenarian Ivan Bunin. Full of venomous spite, it exploded—often with gross unfairness—many literary reputations. Mark Aldanov's *Istoki*, published earlier in English as *Before the Deluge*, at last made its appearance in Russian. Boris Zaytsev's *Yunost* (*Youth*) was another instalment of his autobiographical novel *Gleb's Journey.* There were also several interesting volumes of poetry, both by the poets of the older generation (Serghey Makovsky, Gheorghy Ivanov) and by the younger ones.

Serghey Maksimov's novel *Denis Bushuyev* was acclaimed by critics as the first important literary work by a new *émigré*, a former Soviet citizen and " displaced person." A work of uneven quality, somewhat in the Gorky tradition, it gave the first unbiased picture of life on the Volga under the Soviet regime. Maksimov showed an undoubted talent for description and characterization, but intellectually often found himself out of his depth. Another displaced person, D. Klenovsky, proved a valuable acquisition to the ranks of *émigré* poets.

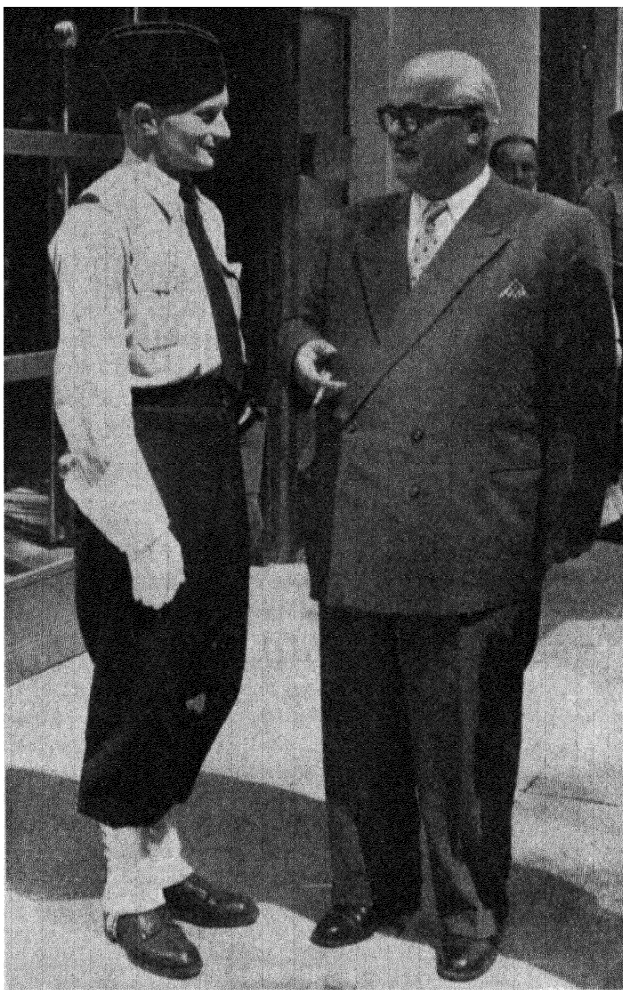
Ivan Shmelyov died in Paris at the age of 75. He would be best remembered for his first novel, *The Waiter*, his *Sun of the Dead*, a grim and powerful picture of the early years of the revolution, and his semi-fictional recollections of the old Russian mode of life, now irrevocably gone, in *The Lord's Year*, which is imbued with a strong feeling for the national religious traditions.

Valentin Kostylyov, author of a long historical novel about Ivan the Terrible, and Pavel Bazhov, who turned to account popular legends of the Urals (one of which, *The Stone Flower*, was made into a successful film), died in the Soviet Union.

(G. St.)

RYE: *see* GRAIN CROPS.

SAAR. A German state (*Land*) united with France by monetary (from Nov. 20, 1947) and customs (from April 1, 1948) union. Area: 734 sq.mi. Pop. (1947 est.): 848,052. Language: German. Religion: Roman Catholic 75%, Protestant 24%. Capital: Saarbrücken (pop., 1939 est.) 135,000, (June 1947 est.) 97,752. High commissioner of the French republic, Gilbert Granval; prime minister (from Dec. 20, 1947) Johannes Hoffmann.



Johannes Hoffman, prime minister of the Saar, seen at Strasbourg during the meetings of the Council of Europe, Aug. 1950, talking to a member of the special gendarmerie.

History. An agreement was signed on March 3 by Johannes Hoffmann, for the Saar government, and Robert Schuman, French foreign minister, regulating the political and economic relations between France and the Saar. A general convention reaffirmed the legislative, administrative and judicial autonomy of the Saar but accorded to the French representative the right of intervention if legislative or executive acts threatened to compromise the economic and customs union with France or the political independence or the external security of the Saar. A Saar representative was to be appointed to France. By an agreement to run 50 years unless the peace treaty determined otherwise France was to manage the coal mines of the Saar but not to become their owner. France promised to support the Saar claim to ownership. A consultative mines council, half of Frenchmen and half of Saarlanders, was to be created. The mines management would pay to the Saar government Fr. 30 for each of the first 2,000,000 tons extracted annually irrespective of profits and loss, and the same sum for each further ton provided there would be a profit. It was calculated that the Saar would probably receive Fr. 70 million a year. The Saar railways were to remain an independent organization; half the council of administration was to be French, but the director general a Saarlander. In principle fares and freight would be the same as in France.

A resolution passed on Dec. 1 by the Landstag (unanimously except for the one Communist deputy) asked that the Saar should be admitted to the Schuman plan negotiations

on an equal footing with the six powers already engaged in them and that the Saar should be granted a substantially larger share of E.R.P. aid by France. It was claimed that it had so far received only Fr. 3,500 million. Three Saar delegates participated in the European consultative assembly, and a Saar minister, with a consultative voice like the German minister, participated in the committee of ministers at Rome.

Unlike Germany the Saarland had no unemployed and in fact was looking for immigrant labour. There were very few strikes in 1950. A one-day demonstration strike in the mines in favour of raising wages to the French level was followed by negotiations on this subject by the Saar government with the French government which administered them. These were in progress at the end of the year.

During the May Day demonstrations organized by the Social Democrats, Communists tried to provoke demonstrations of their own. They carried both the German republican and the red flags. Arrests were made, followed by a trial at the beginning of October. The Communist leaders were condemned to terms of imprisonment for breaches of the peace and violence to the police but they were released pending appeal.

The congress of the Democratic party at the end of October led to the predominance of German nationalists in this party. The party's three deputies declined to accept the new platform and resigned from the party, but retained their seats.

The Saarbrücken university declared itself "European" and was opened to students of all nationalities. It was paid for half by France and half by the Saar. Lectures were in German, French and English, examinations in German and French. The governing body consisted half of Frenchmen and half of Saarlanders. The teaching staff included Saarlanders, Frenchmen, Germans, Swiss, Hungarians and British. The rector was a Frenchman. (D. R. Gi.)

Economy. Production in thousand metric tons:

	1936-38	1947	1948	1949	1950
Steel	2,418	704	1,216	1,756	1,837
Coal	12,500	10,500	12,474	14,236	14,700

ST. CHRISTOPHER: *see* LEEWARD ISLANDS.

ST. CROIX: *see* VIRGIN ISLANDS.

SAINT HELENA. British colony with dependencies of Ascension and Tristan da Cunha, islands in the south Atlantic; uninhabited islands of Nightingale, Inaccessible and Gough also dependencies.

	Area (sq.mi.)	Population (1946 census)
St. Helena	47·3	4,748
Ascension	34	292
Tristan da Cunha	13·5	230

Language: English. Religion: Christian (90% Anglican). Capital: Jamestown (pop. 1,547). Administration: governor; executive council, 4 official members; Advisory Council, 5 unofficial members. Governor, Sir George Joy.

History. Considerable progress was made during the year with a £200,000 development scheme which included agricultural development, soil conservation, re-afforestation and housing. The rebuilding of the flax mills, financed by a cess on hemp exports, was also nearly completed. The isolated dependency Tristan da Cunha for the first time acquired both an industry and a professional administrator. The Colonial Development corporation in co-operation with a South African company opened a factory on the island for the canning of crawfish, and a shop. The islanders were thus able to obtain employment and the island entered upon a cash economy. H. Elliott arrived as the first administrator.

Finance and Trade. Currency: the pound sterling. Budget (1950 est.): revenue £111,071; expenditure £111,071. Foreign trade (1949): imports £135,080; exports, incl. re-exports, £106,881. Principal exports: flax, lily bulbs. (K. G. B.)

ST. JOHN: *see* VIRGIN ISLANDS.

ST. KITTS-NEVIS: *see* LEEWARD ISLANDS.

ST. LAURENT, LOUIS STEPHEN, Canadian statesman (b. Compton, Quebec, Feb. 1, 1882), was educated at St. Charles college, Sherbrooke, and Laval university, Quebec. He was called to the bar at Quebec in 1905 and practised until W. L. Mackenzie King called upon him on Dec. 10, 1941, to be minister of justice and attorney general. From Sept. 4 to Dec. 10, 1946, he held the additional post of secretary of state for external affairs, but on the latter date relinquished the portfolio of justice. He was elected as Liberal member for Quebec East on Feb. 9, 1942. In Aug. 1948 the Liberal party appointed St. Laurent to succeed Mackenzie King as leader, and on Nov. 15 he became the 17th prime minister of Canada. He presided over the federal-provincial conferences on constitutional amendments which opened in Ottawa in Jan. and Sept. 1950, and in February visited New York where he addressed the Canadian Society. In the House of Commons on May 2 he stated that the government did not intend to outlaw Communism in Canada. On June 2 he visited the National Defence college, Fort Frontenac, Kingston, and also met delegates to the national conference of Canadian universities, and a week later received an honorary degree of doctor of laws of the St. Lawrence university, Canton, New York. In addresses at Saskatoon and Fort Qu'Appelle, Saskatchewan, in July, St. Laurent compared the international situation with that of the late 1930s, but expressed confidence that peace would be preserved. On Aug. 7, he broadcast on international affairs and Canadian defence. He opened the annual Calgary exhibition and stampede on Calgary's 75th anniversary, riding at the head of the procession in cowboy dress. On the death of Mackenzie King on July 22 St. Laurent said: "Today the government of our country has lost its wisest counsellor and the people of Canada their greatest public servant." During the year he received the prime ministers of Pakistan (May-June), Australia (August) and Great Britain (December).

ST. LUCIA: *see* WINDWARD ISLANDS.

SAINT-PIERRE AND MIQUELON. Group of eight small islands off the south coast of Newfoundland; a former French colony the status of which was changed in 1946 to that of overseas territory. Area: 93 sq.mi. Pop.: (1936 census) 4,715; (1945 census) 4,354. Language: French. Religion: Roman Catholic. Chief town, Saint Pierre (pop., 1945, 3,636). Administrator, Alain Alaniou.

History. The cod-fishing, which was the territory's only source of wealth, was poor in 1949 (903 metric tons against 1,023 tons in 1948, which was already a bad year). The greater part of the catch was exported to the West Indies. In spite of opposition by the small-boat owners, the territory in 1950 purchased a trawler in experimental preparation for deep-sea fishing, which, with the inception of an important cold-storage warehouse, was likely to revolutionize the local economy. From the time of the first trawl the Development company unloaded by the end of the year 320 metric tons of codfish worth Fr.C.F.A. 6 million.

Foreign Trade. (Million francs C.F.A., 1949; 1950, six months, in brackets) import 330·7 (179·9); export 359·9 (70·4). Main exports (1949, metric tons): dry cod 2,583; fresh cod 4,767; cod-liver oil 96.

Transport and Communications. Ships entered (1949) 195. Cargo (metric tons): unloaded 25,800; loaded 7,600.

Finance. Budget (1949 actual): balanced at Fr.C.F.A. 173·3 million. Monetary unit: franc C.F.A. = M.Fr. 2. (C. A. J.)

ST. THOMAS: *see* VIRGIN ISLANDS.

ST. VINCENT: *see* WINDWARD ISLANDS.

SALOTE TUPOU, Queen of Tonga (b. March 13, 1900), succeeded to the throne on the death of her father, George Tupou II, on April 12, 1918. King George Tupou II had reigned from 1893 when King George Tupou I—the founder of modern Tonga—died at the age of 96 after a reign of nearly 50 years. On the occasion of the centenary of the founding of the unified kingdom of Tonga on Dec. 4, 1945, the Queen was presented by the British government with a saluting battery of four guns, and by King George with the grand cross of the Order of the British Empire. In June 1947 her two sons, Crown Prince Tungi and Tu'ipelehake were married at a double wedding ceremony in Nuku'alofa. From January to April 1948 she was in New Zealand and in July of the same year she received in Tonga the governor general of New Zealand, Sir Bernard Freyberg, and Lady Freyberg. On March 13, 1950, she celebrated her 50th birthday and among the messages of congratulation she received was one from King George. The occasion was also the 50th anniversary of the treaty of friendship between Great Britain and Tonga. In November she arrived in New Zealand by m.v. "Matua" for a private visit. She married Prince Uiliami Tungi who died in 1941.

SALVADOR, EL. Republic on the west coast of Central America, the only one without a Caribbean littoral. Area: 13,176 sq.mi. Pop.: (1930 census) 1,434,361; (mid-1949 est.) 2,150,000. Aboriginal and mixed races, *ladinos* and *mestizos*, constitute the bulk of the population. Language: Spanish. Religion: Roman Catholic. Chief towns (pop., 1948 est.): San Salvador (cap., 124,266); Santa Ana (51,351); Nueva San Salvador, formerly Santa Tecla (25,684). President, Lieut. Colonel Oscar Osorio.

History. The year 1950 marked a return to democratic government in El Salvador for the first time since the constitution of 1896 was abolished in 1931. A national election, held on March 26-28, employed the secret ballot and, for the first time, allowed women to vote. The result was a decisive victory for the moderate Revolutionary party. Oscar Osorio was elected president over Colonel José Asensio Menéndez of the leftist Reform Action party, and Osorio's partisans won a majority of the seats in the Constituent Assembly. The latter enacted a new constitution which went into effect on Sept. 14, when Osorio was inaugurated. Among other provisions the new basic law contained enabling clauses for social and economic reform and guarantees for democratic government. Salvador Castañeda Castro, former president, who had been deposed in 1948 by the revolutionary junta which sponsored the return to democratic government, was released from prison in September after a court investigation had found him innocent of charges that he had enriched himself illegally during his regime.

Education. Schools (1948): primary 1,986, teachers 4,368, pupils 144,056; secondary 53, teachers 636, pupils 5,000. Illiteracy: 87·3%.

Foreign Trade. Exports in 1949 amounted to 137 million colones (114 million in 1948); imports, 97 million colones (103 million in 1948). More than 70% of the trade was with the United States. Coffee (1,259,939 bags of 132 lb. in 1949) accounted for about 90% of the value of all exports.

Communications. (1948) Railways: 377 mi. Roads: 1,950 mi. including 700 mi. of surfaced highways; there were 4,296 cars and 1,886 lorries and buses registered. Telephones: 4,900. Wireless receiving sets 14,500.

Finance. Budget (1950 est.) called for expenditures of 77·7 million colones; the proposed budget for 1951, a record 110 million colones. Currency circulation (Oct. 1950): 64·5 million colones. Monetary unit: *colón* valued at 40 U.S. cents. (M. L. M.)

SALVATION ARMY. Among the principal events in 1950 was the international salvationist youth congress, to which 1,200 young people (two-thirds of them from overseas) gathered in London from Aug. 10 to Aug. 23.

Earlier in the year (Feb. 8-June 11) General and Mrs. Orsborn had inspected work in Australasia and Indonesia, conducting public meetings attended by over 125,000 people as they did so. While viewing reconstructive enterprises in Indonesia, the general was received by President Ahmed Sukarno.

By order of the central executive of the national committees in Czechoslovakia, the Salvation Army in that country was disbanded on June 17. No reason was given for this decree and no activities of the Salvation Army could accurately be described as subversive, as its officers are bound by their own regulations to be non-political. However, this action brought to an end the 31 years' work of a small but influential group of Czechs who were undoubtedly loyal both to the gospel and to their homeland.

Work elsewhere in Europe continued to prosper: new social enterprises were opened in France; evangelical activity went on in Rome; and the rebuilding of war-damaged properties proceeded in the Netherlands. After opening the International Staff college at Sydenham, London, on Oct. 10, General Orsborn went on a tour of inspection to France and Belgium (Oct. 27).

The most important of the year's publications in London was the second volume of Robert Sandall's *History of The Salvation Army*, which carried the story of the army's inception and growth from 1878, the year in which it was given its name, to 1886, the year of the first international congress. Other new books included *The Sword of God*, a volume of poems by Catherine Baird; *Bass of Grays* by Bernard Watson, a mid-century pendant to the classic Broken Earthenware stories; and *Thirty Years in Indonesia* by Adelaide Ah Kow, an Australian writer of Chinese extraction who specialized in the religious biography of the Antipodes. (F. L. C.)

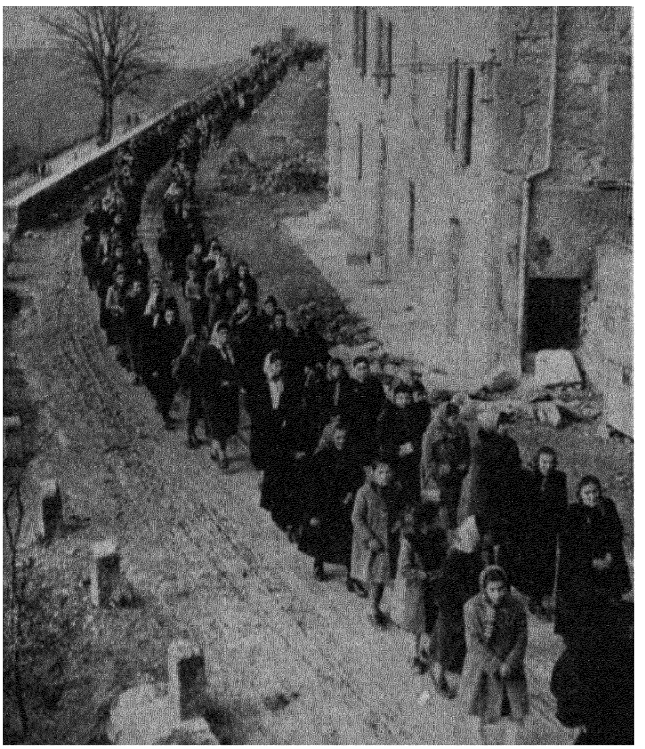
United States. In connection with the Mid-century White House Conference on Children and Youth which was called by President Harry S. Truman in December, the Salvation Army in the U.S. made extensive plans for its effective participation in the actual meetings and in the important follow-up work after the conference. Its report to the conference, *Testament to Youth*, a thorough analysis of the Salvation Army's youth programme was published and widely distributed

During the year the Salvation Army held 95,187 meetings on street corners In its social-service activities, 22,898 patients were treated in five clinics and dispensaries; 1,258 missing persons were located; 34 maternity homes and hospitals for unwed mothers cared for 11,123 women and children; 45,735 mothers and children were sent to summer camps. A total of 106 men's social-service centres provided shelter and work for 29,216 men. In the field of prison work, 10,960 prisoners were assisted on discharge and given employment; 1,790 prisoners were paroled in care of the Salvation Army. (E. I. P.)

SAMOA, AMERICAN: *see* PACIFIC ISLANDS.

SAMOA, WESTERN: *see* NEW ZEALAND; TRUST TERRITORIES.

SAN MARINO. Small republic in central Italy, entirely surrounded by the province of Emilia and situated on the slopes of Monte Titano, 14 mi. S.W. of Rimini. Area: 38 sq.mi. Pop. (June 30, 1950, est.): 12,780. Language: Italian. Religion: Roman Catholic. San Marino is governed by two *Capitani Reggenti* appointed every six months by a Grand Council of 60 members elected by universal suffrage every four years. Regents: (April-Sept. 1950) Giuseppe Forcellini and Primo Taddei; (Oct. 1950-March 1951) Marino Della Balda and Luigi Mortironi.



Citizens of San Marino taking part in the annual procession in honour of the country's patron saint, Agatha, on Feb. 5, 1950.

History. On May 16 the Italian Chamber of Deputies, on the government's advice, postponed *sine die* the ratification of a financial agreement concluded between Italy and San Marino according to which the former would pay to the latter an annual sum of L. 90 million as from 1946. As it was explained to the Italian parliament, the reason for this postponement was that, to avoid Italian taxation, Italian businessmen had registered more firms in San Marino than the republic had inhabitants.

Education. In May 1950 there were 1,243 pupils in primary schools and 191 in secondary.

Finance. Budget for the financial year April 1, 1949-March 31, 1950, was balanced at L. 497,737,496 and for the year 1950-51 at L. 551,647,786.

SÃO TOMÉ: *see* PORTUGUESE COLONIAL EMPIRE.

SARAWAK: *see* BRITISH BORNEO.

SARGENT, SIR (HAROLD) MALCOLM WATTS, British orchestral conductor (b. Stamford, Lincs., April 29, 1895), was still at Stamford school when he became an associate of the Royal College of Organists; he had conducted his own orchestra at the age of 14. He was an articled pupil at Peterborough cathedral, 1911-14, and took his music degree before he was 21. Sargent was a friend of Sir Edward Elgar and was a pupil of Benno Moiseiwitch, 1919-21; he began a career of great promise as a concert pianist, but turned to conducting on the advice of Sir Henry Wood. His *Impressions on a Windy Day* was first performed at a 1921 London Promenade concert. Between the World Wars he became well-known as a conductor of opera and ballet and at festivals and special series of concerts, including the children's concerts at Westminster. Among first performances that he conducted was that of Ralph Vaugham Williams' *Hugh the Drover* in 1924. He conducted for the Diaghilev ballet seasons in London, 1927-30. From 1936 he undertook many overseas tours to Australia, the U.S., South Africa, Palestine and in Europe. He became conductor in chief of the Royal Choral society in 1928, conducted the Hallé Orchestra, 1939-43, and the Liverpool Philharmonic orchestra, 1942-48. From 1947 he was a regular conductor at the "Proms." On May 4, 1950, it was announced that Sargent would succeed Sir Adrian Boult as permanent conductor of the B.B.C. Symphony orchestra. He visited Athens twice during the year, in February and at the end of September, to conduct the Athens State orchestra, and toured South America in May and June, conducting at Montevideo, Rio de Janeiro, Santiago de Chile, and elsewhere.

SAUDI ARABIA: *see* ARABIA.

SCANDINAVIAN LITERATURE. Sweden. The last mists rising from the "literature of anguish" produced by the extremist writers during the 1940s were dispersed by the dawn of the new half-century, which revealed signs of a romantic revival, especially among the young writers. It seemed that the experimental writing of the 40s had evolved into a tempered modernism, a blending of realism and romanticism. The great interest shown in literature, both by readers and authors, was exemplified by the encouraging number of literary and discussion circles in secondary schools, universities and youth clubs.

An outstanding novel in 1950 was *Barabbas*, by one of the best living Swedish authors Pär Lagerkvist, an imaginary account of Barabbas's search for truth after his release and the crucifixion of Christ; among the younger writers Per E. Rundquist won his spurs with *Kalla mig Ismael!*, a remarkable psychological study of a middle-aged woman on the verge of a nervous breakdown; Sivar Arnér maintained his reputation with *Vackert väder*—a somewhat softer note was apparent in the usual astringency of his style—and Mårten Edlund skilfully portrayed in *Den frusna våren* a well-meaning father's intimidating influence on an adolescent boy. A promising first novel was *Att vänta någon hem* by Karl Rune Nordkvist. The mature and sensitive Arvid Brenner's contribution to 1950 was a book of short stories, *Hägringen. Dimman från havet*, finely chiselled short stories in an American setting, by Thorsten Jonsson, was published posthumously.

The best of the year's poems were *Med cyklopöga* by Bertil Malmberg (who also published his autobiography, *Ett stycke väg*); *Ingenting lever länge* by Einar Malm; *Nattliga besök* by Stig Sjödin and *Invigelse* by Östen Sjöstrand. A new edition of Frans G. Bengtsson's poems appeared, illustrated by Gunnar Brusewitz.

General literature included two biographies of poets: a portrait of Gustaf Fröding by Henry Olsson and *Drabbad av renhet* by Margit Abenius, an account of the life and work of Karin Boye. Knut Hagberg, the eminent literary historian, naturalist and authority on English literature, wrote *Svenskt djurliv i mark och hävd* and *Årets gång*, dealing with animal life and tradition, and a book on Öland; and Karl Ragnar Gierow wrote some delightful essays, *Mina utflykter*, on his excursions in Scotland, Skåne and literature.

The following Swedish writers died in 1950: Martin Lamm (b. 1880), Ossian Elgstrom (b. 1883), Sigfrid Lindström (b. 1892), Harry Blomberg (b. 1893), Thorsten Jonsson (b. 1910) and two young poets, Eva Neander and Gösta Oswald.

Denmark. There was no marked literary trend in Denmark during 1950, as neither Norwegian nor Danish literature went through the same phase of agonizing doubt or probing introspection during the years after World War II as was the case in Sweden. Paradoxically enough, the two countries directly affected by the war reflected a confident and constructive spirit.

The dominating position was held by H. C. Branner and Martin A. Hansen, the former with *Brændte skibe* (four lengthy short stories together forming a whole and evincing a reborn

faith in mankind and its possibilities) and the latter with *Løgneren* (a novel about the effects of the spring on the human spirit). *Iners* was a novel—poetic and full of humour—about a ne'er-do-well, by Frank Jaeger, who also produced a new volume of poems, *De 5 Aarstider*. Aage Dons's 1950 novel was *Den svundne Tid er ej forbi*, dealing with life on a Danish country estate during World War I; Leck Fischer painted a vivid picture of Copenhagen and the countryside during the worst period of the German occupation in *Dette latterlige Land;* Palestine during the time of Christ was seen from a new and surprising angle by Hans Kirk in *Vredens søn;* Karin Michaëlis wrote the third and last volume of her reminiscent novels, *Lys og Skygge*; and William Heinesen's *De fortabte spillemænd* was a great artist's portrayal of the demands of modern life. Two other works of fiction worthy of note were *Ikke af kærlighed*, by Grethe Heltberg, a novel about middle-class life in modern Copenhagen, and *I berøring med livet*, ten short stories about men's and women's attitude to love.

Paul la Cour published new poems, *Mellem Bark og Ved*, along with some philosophic reflections, *Fragmenter af en Dagbog; Nature morte* was a collection of poems, clear and positive in thought, by Iljitsch Johannsen; Ove Riisbjerg Jensen wrote of the affinity between everyday life and the soil in *Hjemme på landet*; and the poems by Hans Mølbjerg in *Din bog* showed a purity of style which excluded everything superfluous.

During 1950 Danish literature suffered the loss of Johannes V. Jensen, Karin Michaëlis (for these two writers see OBITUARIES), and Frederick Schyberg (b. 1905), the dramatic critic and author of *The Art of Acting*.

Norway. Norwegian poetry and prose after World War II showed an ethical tendency, and one noticed the emphasis on human kindness and love as opposed to cold indifference and hostility. Three important novels in 1950 which faced up to current problems were *Signalet* by Tarjei Vesaas; *Skredet* by Finn Havrevold (his best to date); and *Det store veiskillet* by Kåre Holt. *De . . . og alle vi* by Hans Geelmuyden and *Stemmene og nuet* by Finn Carling both dealt with young people and their problems in postwar Norway; two excellent novels about modern farming life were *Verda var atter ung* by Knut Hauge and *Den dyre lov* by Johannes Heggland; Aksel Sandemose wrote a humorous pirate novel from the 16th century, *Eventyret fra Kong Rhascall den syttendes tid*, and an interesting first novel about marriage was *I gode og vonde dager* by Ellen Løyning. Short stories of note were "Skiftende bris" by Arthur Omre; "Kaleidoskop" by Synnøve Christensen; " Lekende liv " by Ernst Orvil; " Trompeten " by Per Wollebaek and a promising first collection by Sigbjørn Hølmebakk called *Ikke snakk om høsten.*

The famous poet Arnulf Øverland published new poems called *Fiskeren og hans sjel*; Henrik Rytter surveyed the struggling world in *Likevel!*; and a new poet, Ivar Orgland, wrote some admirable love poems, *Lilje og sverd.* Two anthologies of Norwegian poetry from the Viking age to modern times were *De 100 beste dikt* and *Norsk lyrikk gjennom tusen år.* Arne Skouen published a play, *Leirplassen*, dealing with Norwegian troops in Sweden during World War II. (A. BLR.)

SCHUMAN, ROBERT, French statesman (b. Luxembourg, June 29, 1886), of Lorraine stock. Admitted to the bar in Metz before World War I, he was elected deputy of the recovered *département* of Moselle in 1919 and was afterwards continually re-elected. In the Chamber of Deputies he was a member of the conservative Republican Democratic union, but in 1932 he joined the Democratic Popular (Catholic) party. On March 21, 1940, he was appointed under-secretary of state in Paul Reynaud's cabinet and was responsible for the refugees from Alsace-Lorraine, a post which he kept after the armistice. When the Germans re-annexed the three recovered *départements* and, in Sept. 1940, started the expulsion of Lorrainers from the Moselle, Schuman was arrested by the Gestapo and sent to Germany in April 1941 for protesting, but he escaped in Aug. 1942 and went into hiding in France. Again elected deputy of the Moselle in Oct. 1945, and later re-elected, he joined the M.R.P. (Mouvement Republicain Populaire). He was minister of finance in the Bidault (June-Nov. 1946) and Ramadier (Jan.-Nov. 1947) cabinets. On Nov. 22, 1947, he was nominated by the National Assembly to form a new government. He resigned on July 19, 1948, and joined the Marie cabinet as foreign minister. On Aug. 31 he was again the head of a government that lasted only seven days. On Sept. 11 he became foreign minister in the Queuille cabinet and was re-appointed to this post in the Bidault (Oct. 28, 1949), Queuille (June 30, 1950) and Pleven (July 11) cabinets. In a statement published on May 9 he launched what was described as the Schuman plan which was aimed at the formation of a European Coal and Steel Pool (*q.v.*). In Sept. 1950 he visited New York to take part in the discussions on the international situation with his U.S. and British colleagues and in the meeting of the North Atlantic council. On Sept. 27 he addressed the general assembly of the United Nations.

SCHUMAN PLAN: *see* EUROPEAN COAL AND STEEL POOL.

SCOTLAND. Part of the United Kingdom of Great Britain and Northern Ireland. Area: 30,400 sq.mi. Pop. (June 30, 1950 est.): 5,209,000. Scotland has its own legal system and the secretary of state for Scotland, a United Kingdom minister, is wholly responsible for the matters dealt with by the Scottish Agriculture, Education, Health and Home Departments, shares responsibility with other ministers for certain services organized on a United Kingdom basis and, as Scotland's minister in the government, is necessarily concerned in all matters affecting Scottish production and economic planning and development. Secretaries of state in 1950: Arthur Woodburn and, from Feb. 28, Hector McNeil.

History. The Scottish drive for exports which had been given a great impetus by the Scottish Industrial exhibition in Glasgow in 1949 was intensified in 1950 and met with considerable success. Overseas exports from the southwest of Scotland for Jan.-June were about 300% higher than for the corresponding period of 1949. An increasing number of buyers of pedigree livestock came from Canada, America, Australia, New Zealand, South Africa and Argentina to buy from Scottish breeders. On Oct. 1 further steps were announced to attempt to achieve the complete eradication of tuberculosis in Scottish cattle. Scotland already had a good record in self-imposed eradication work by dairy farmers and some parts of the country were 100% clear. Another important measure for agriculture was the setting aside of the sum of £10 million for the improvement of upland farms to encourage the increased production of beef cattle for the home market. The increased output from Scottish farms, measured in money, kept abreast of the United Kingdom agricultural expansion programme.

The fishing industry met with serious difficulties during the first part of the year because of the falling demand and the rising cost of fishing. The problems confronting the white fish interests were so basic and complex that the government in July granted a subsidy for six months and set up a White Fish authority to regulate, reorganize and develop that side of the industry. After a poor summer season in Scotland landings of herring from Scots and English fleets were heavier during the East Anglian fishing season. In November a bill to strengthen the law on illegal fishing for salmon and



The scene in the picture gallery of the Palace of Holyroodhouse, Edinburgh, on Feb. 21, 1950, when the Scottish peers met to elect 16 of their number to represent them in the House of Lords. Standing is Lord Aberdeen who is reading his list of candidates.

freshwater fish was introduced in the House of Commons.

More U.S. firms set up factories in Scotland during the year. There were 30 such factories in Scotland operated by 22 firms at the end of 1950. In addition other U.S. firms were endeavouring to reach licence agreements with Scottish manufacturers. The government's *Programme of Highland Development* was published during the year. The policy it set out followed four main lines: the extension of such basic services as housing, water supply, drainage, health services, education and roads; the development of the principal industries of agriculture, forestry, fishing and tourism; the development of highland natural resources—minerals, seaweed and peat; and the encouragement of suitable manufacturing industries.

One of the major hydro-electric projects in the Highlands, at Loch Sloy, was opened by the Queen in October, and the generating station of 130,000-kw. capacity on Loch Lomondside came into full operation by the end of the year. Clunie and Pitlochry power stations, two of three generating stations under the Tummel-Garry (Perthshire) project, and the Crudie Bridge station of the Fannich scheme in Ross-shire became fully operative. They had a combined capacity of approximately 100,000 kw. Three other large schemes and four smaller schemes for local supply were still under construction at the end of the year. At Dundee generating station a 15,000-kw. closed-cycle gas turbine, the first of its kind in Britain, was being installed, and an experimental 100-kw. wind-driven generator was to be erected at Costa Head, Orkney.

Efforts to reduce the incidence of tuberculosis were greatly intensified during the year and several hundred additional hospital beds were brought into use. B.C.G. vaccination was begun and more mass radiography was undertaken with three additional mobile units. The position was still serious but the tuberculosis death rate was the lowest on record. Figures for the first half of the year showed not only a further 20% reduction in the mortality rate but also the first fall in the number of respiratory notifications since before World War II. In the third quarter of the year infant mortality at 33 per 1,000 live births was the lowest ever recorded in Scotland.

A scheme of legal aid for persons of restricted means came into operation. Many of the provisions of the Criminal Justice (Scotland) act, 1949, were brought into force on June 12, 1950; penal servitude and hard labour were abolished and changes made in the probation and Borstal systems and in the disposal of persons of unsound mind or mentally defective.

An important educational change was made in the method of award of the Scottish Leaving certificate. A candidate was no longer debarred from obtaining the certificate by failure to secure passes in every one of a specified group of subjects. There was a notable increase in the numbers of exchanges of teachers with the Dominions, the U.S. and the continent of Europe since the end of World War II. In 1950 about 100 teachers were exchanged.

A committee to enquire into the practicability of making a return of government revenue from and expenditure in Scotland and also of Scottish imports and exports was set up in May and met several times before the end of the year.

(D. ME.)

SCOTT, SIR GILES GILBERT, British architect (b. Hampstead, London, Nov. 9, 1880), the son of an architect and grandson of Sir George Gilbert Scott (see *Encyclopædia Britannica*), the notable architect of the Victorian gothic revival, was educated at Beaumont college, Old Windsor. In 1898 he was articled to Temple Moore, a noted church architect, and only five years later won the commission for the new Anglican Liverpool cathedral with his " modified-gothic" design. Later he designed many other church buildings including Charterhouse school chapel, the nave of Downside abbey and the abbey church at Ampleforth. He was responsible for the new University library and extensions to Clare college, Cambridge; at Oxford he designed additions to Magdalen college and Lady Margaret hall and the new Bodleian library building. He was also the architect of a series of power stations, including that at Battersea, London, and of Waterloo bridge. In 1942 he was appointed architect of the new Coventry cathedral but after his design — a gothic exterior and more modern reinforced concrete interior — had been criticized by the Royal Fine Arts commission, he withdrew. In 1944 he was chosen as architect of the new House of Commons chamber, a simplified version of the chamber destroyed in World War II; the new building was completed

in 1950 (*see* PARLIAMENT, HOUSES OF). Scott was elected A.R.A. in 1918, R.A. in 1922 and was president of the Architectural association, 1920-21, and of the Royal Institute of British Architecture 1933-35. In 1924, after the consecration of Liverpool cathedral, he was knighted and in 1944 received the Order of Merit. (*See* also *Encyclopædia Britannica.*)

SCULPTURE. In the sculpture of 1950 two approaches continued to be evident: the humanistic and the abstract, not incompatible classifications which were accompanied by a sharper opposition of the massive and the constructional. Such contrasting aims and methods revealed the inadequacy of the single word "sculpture" for three different forms of plastic expression, one created by breaking down the material, another by building up and yet a third by the association of separate forms, even of different materials.

Sculpture, being capable of giving position and limits to planes in space, gave non-representational work an interest which could only be hinted at in pictorial terms. Incised lines and cavities further extended the sculptor's means of expression. The tension between the claims of humanity and the requirements of abstraction found in Henry Moore an artist worthy of his international reputation and the numerous exhibitions which his work enhanced. As hitherto he found the female figure an ample field for the expression of his great sense of rhythmically ordered forms.

In the work of Barbara Hepworth the non-representational took precedence over the realistic, her great "Biolith" attracting much attention. Her work represented British sculpture at the Venice Biennale exhibition in the summer, where Hans Arp, leader of the still active French exponents of this idiom, also exhibited five works. At the age of 70, Jacob Epstein (*q.v.*) once again divided the critics with a characteristic *tour de force*. The sixth of his great stone figures, "Lazarus," a work of much power, had the essential character of carving as the bronze portraits (which included the magnificent "Dr. Vaughan Williams") shown with it had that of modelling.

Of academic sculpture the more vital examples derived from Auguste Rodin and German Expressionism. The exhibition of the wooden figures of Ernst Barlach at Venice showed that the latter movement still meant something to a later generation. The human figure in movement was the main preoccupation of Charles Wheeler and Dora Gordine and individual personality that of Benno Elkan. The manner of Charles Despiau and Aristide Maillol survived in the terra-cotta figures of Karin Jonzen in England and the work of Giacomo Manzù in Italy; that of Amadeo Modigliani in the work of Maurice Lambert, Frank Dobson (who made a distinguished head of Lydia Lopokova) and Henri Laurens, who, however, gave it a more personal twist; and of Edgar Degas in the bronze figurines of Uli Nimptsch.

In England F. E. McWilliam's work, using dismembered and re-integrated human anatomy, was almost a form of plastic surrealism. William Turnbull, showing some affinity with the Constructivists, and Paolozzi, both young and talented, exhibited work developing from continental influences. Of the work of H. Henghes the terra-cotta "Dancers" was outstanding. This was seen at an exhibition "Sculpture in the Home," organized to prove that small sculpture was within the reach of the average purse. Ossip Zadkine's work occupied a place somewhat apart, his bronze "Orpheus," seen at Venice, fusing formal ideas with borrowings from the human figure and achieving an impressive degree of arrested movement. Marino Marini was also exceptional in revealing Chinese T'ang pottery and Etruscan sources in his studies of contrasted movement.

In opposition to the sculpture depending on mass, that more correctly named "construction" or even "fabrication"—relying on the absence of mass and the exploration of the void, an experimental idiom deriving from Alexander Archipenko through Pablo Picasso, Jacques Lipschitz and Alberto Giacometti (its most distinguished exponent)—found an Italian adherent in Mirko Basaldella. From this movement grew the mechanistic or industrial school of thought whose productions differed from prevailing trends in that they were neither carved nor modelled but fabricated. Charles Adams whose "Horned Beast," owing much to Picasso, was the most remarkable of his new works, and Reg Butler, with a preference for iron, were the principal exponents of this idiom. (N. A. D. W.)

United States. In 1950 much new work in the U.S. followed the symbolical trends shown in Great Britain by Henry Moore, in Italy by Alberto Giacometti and in the United States itself by Theodore Roszak, David Smith and others, which to some extent united natural forms or ideas and the abstract. Roszak, whose sense of fantasy was admirably demonstrated by his fusing or brazing techniques, and Smith, by his forging and welding methods, developed their work in reasonable harmony with Giacometti, who held his first important New York exhibition. Classical traditions were drawn upon by José de Cresft and Oronzio Maldarelli in the U.S., where William Zorach showed his Renaissance-inspired work retrospectively and Koren der Harootian progressed with work of a striking and restrained expressiveness; but these maturer artists were generally less prominent than the younger experimental sculptors.

Important though not numerous acquisitions of modern sculpture were made in the U.S., among them the addition of the abstract "Fish," in grey marble, by Constantin Brancusi to the Museum of Modern Art collection (New York). One of the larger works of the Rumanian-born sculptor (now in semi-retirement), it was joined there by new work by Marino Marini and Giacometti. Projects for sculpture included exhibitions of religious work which were organized as signs of a new spiritual revival in the western world.

Production of monumental sculpture appeared somewhat less extensive than during 1949. Nevertheless the tightening of the demand upon materials, already forecast by developments in Korea and the expanding defence programme, did not materially affect this activity or the field of metal sculpture in general. The monumental work was traditional and included, notably, a statue of Brigham Young. It was completed in marble by Mahonri Young, distinguished elder sculptor, a grandson of the Mormon leader, and unveiled in the rotunda of the national capitol in Washington. A bronze equestrian statue of the British field marshal, Sir John Dill, was completed by Herbert Haseltine, and unveiled in Arlington National cemetery, near Washington. (*See* also ART EXHIBITIONS; ART SALES; MUSEUMS.) (C. BU.)

SEISMOLOGY. The great earthquake on Aug. 15 in northern Burma and Assam was, according to seismographic records, as great as any ever recorded on modern seismographs. While the toll of 574 deaths and an early damage estimate of about £7 million in India might seem light in comparison with the losses in scores of other great earthquakes, the extent of the upheaval was verified by airmen who reported that entire mountain chains in the eastern Himalayas had changed form. The damming of rivers by landslides caused many deaths. According to a recently developed formula for measuring earthquake energy, the Aug. 15 shock represented an energy release roughly equal to that of all the earthquakes of the world for a normal two-year period.

On July 9, an estimated 150 persons were killed in north-eastern Colombia, and on May 21 a highly localized shock at Cuzco, Peru, killed at least 83. Between 15 and 20 persons were killed in each of three shocks that struck eastern Turkey; near Serabaja, Java; and El Tocuyo, Venezuela. In Hawaii, a strong shock on May 29 that caused damage in Hilo was the prelude to Mauna Loa's greatest lava flow.

New data on the extent and depth of the continental shelf sediments and the depths of other sedimentary layers on the bottom of the Atlantic ocean were obtained by running seismic refraction profiles. A new theory of seismic surface wave propagation was used to postulate the geological structure of sedimentary layers and basement rocks beneath the oceans from ordinary seismograph records.

The publication of B. Gutenberg and C. F. Richter's book *The Seismicity of the Earth and Associated Phenomena* (1949) gave for the first time the magnitudes of several thousand of the strongest shocks recorded on modern seismographs. From this first extensive catalogue evaluating the energy of earthquakes as well as their location and depth, Hugo Benioff concluded that since 1907 the strains accumulated from the slow movements of magmatic rock were released in five active periods of decreasing length separated by quiescent intervals.

Through a world-wide telegraphic service reporting seismographic data the U.S. Coast and Geodetic survey gave authentic reports on the location of 600 earthquakes. The great Himalayan earthquake in August was located within five hours. (*See* also OCEANOGRAPHY.) (F. NEU.)

SENANAYAKE, DON STEPHAN, Ceylonese statesman (b. Oct. 20, 1884) was educated at St. Thomas college, Mount Lavina, Ceylon. A planter by profession he entered politics in 1924 when he was returned unopposed to the Legislative Council. He was again elected in 1931 and 1936, and from 1931 until 1947 was minister of agriculture and lands. From 1942 until 1947 he was also leader of the state council and vice-chairman of the board of ministers. On Sept. 26, 1947 he was called upon to form a government to which on Feb. 4, 1948, was handed full dominion status within the Commonwealth of Nations. In addition to being prime minister he was minister of defence and minister of external affairs. He attended the Commonwealth prime ministers' conferences in London in 1948 and 1949, and in Jan. 1950 presided over the first conference of Commonwealth foreign ministers which was held in the Senate building at Colombo. In a message on the second anniversary of independence, Feb. 4, 1950, he said that there was every reason to look back on the previous year with pride. On Aug. 28, he formally opened the Central Bank of Ceylon. He left Colombo on Dec. 27 to attend the meeting of Commonwealth prime ministers in London in Jan. 1951.

SENATE: *see* CONGRESS, U.S.

SENEGAL: *see* FRENCH WEST AFRICA.

SERETSE KHAMA, chief designate of the Bamangwato, Bechuanaland Protectorate (b. Bechuanaland, July 1, 1921), succeeded his father Sekgoma II, in 1925; tribal rule, however, was vested in a regency council and from 1926 in a regent, Seretse's uncle Tshekedi. Seretse took a B.A. at the South African Native college, Fort Hare, before going to Balliol college, Oxford, in 1945; later he studied law in London and on Sept. 29, 1948, in the face of opposition from Tshekedi and the tribe, married a London typist, Ruth Williams. In Nov. and Dec. 1948 and June 1949 *kgotlas* (tribal councils) were held at Serowe, the Bamangwato capital, to discuss the situation; at these meetings, which Seretse attended, opinion swung from condemnation of the marriage to a majority decision in favour of his installation as chief and acceptance of his European wife. Tshekedi and some influential supporters subsequently left the Bamangwato reserve in protest and later asked for a judicial enquiry into the question. An enquiry was held in July 1949 and later a report made which was not published, on the grounds that certain views were expressed with which the British government could not associate itself. The report advised, however, that Seretse should not be recognized and should be excluded from the protectorate, and that Tshekedi should not be allowed to return to the reserve. In Feb 1950, Seretse was invited to London to discuss the matter at the Commonwealth office, his wife remaining at Serowe. He rejected advice to abandon claims to the chieftainship in the interests of tribal peace and on March 8 it was announced that the enquiry's recommendations would be implemented; Seretse's exile would last at least five years, during which period he would receive a grant from U.K. funds. The decisions were at once challenged from many quarters; a Liberal motion of protest was tabled in the Commons and a " Fighting Committee," led by Learie Constantine, was set up in London. Seretse himself subsequently instituted proceedings against the high commissioner, but withdrew them in August. In mid-April he was allowed to go to Bechuanaland to prepare a property inheritance lawsuit and to see his wife; on May 15 she gave birth to a daughter. In early June Seretse and his family moved to Lobatsi, outside the tribal area and, on Aug. 21, arrived in London. A joint statement issued by Seretse and Tshekedi on Aug. 17 announced that although the latter's views on the marriage were unchanged, a measure of co-operation in matters affecting the tribe had been agreed upon.

See Julian Mockford, *Seretse Khama and the Bamangwato* (London, 1950); *Bechuanaland Protectorate: Succession to the Chieftainship of the Bamangwato Tribe* (Cmd. 7913, H.M.S.O., London, 1950).

SEWERAGE. The inaugural meeting of the public health engineering division of the Institution of Civil Engineers was held on May 16. The object of the meeting was the promotion of the general advancement of engineering in relation to the maintenance and improvement of public health, especially in the solution of problems of water supply, sewerage, refuse disposal, river pollution, flood control, land drainage, the abatement of smoke and atmospheric pollution and the control of insect-borne diseases. A visit to the Atomic Energy Research establishment at Harwell, to inspect the effluent disposal arrangements, was made on Sept. 19., and a meeting held on Oct. 24, when B. A. Southgate, director of the water pollution research laboratory, Department of Scientific and Industrial Research, gave a paper on the " Pollution of Streams: Some Notes on Recent Research." The road research laboratory of D.S.I.R., supported by the London County Council and the Ministry of Works, began a research programme, to cover several years, into rainfall run-off from sewered areas, in view of the generally appreciated need for accurate data for the design of surface-water sewers and combined sewers.

Sewerage works of particular note were those in connection with L.C.C. housing projects (most of which were for estates outside the county), costing in the region of £3 million. Works at Aveley, Hainault, Debden and Harold Hill, in Essex, and at St. Paul's Cray, Kent, reached advanced stages towards completion. Work was begun at Boreham Wood, Hertfordshire, and at Merstham and Sheerwater, Surrey. The researches of the L.C.C. into methods of treating sewage, to end the serious pollution of the Thames, culminated in the first large-scale contract of a programme for sewage treatment works, a tender of £851,230 for the construction of 16 sedimentation tanks at the Northern Outfall works, Beckton, Essex, being accepted. It was estimated that further construction of treatment works would cost in the region of

£10 million, of which £3 million would be spent in the subsequent five years.

The Rivers (Prevention of Pollution) bill, published on Nov. 16, was framed to repeal the existing acts of 1876 and 1893, to make it an offence for any person to permit refuse or rubbish to interfere with the flow of a stream or to allow any polluting matter to enter a river, and to impose restrictions on cleansing and dredging operations without the consent of the river board. (L. B. E.)

SEYCHELLES. British colony and dependencies, 92 islands (Mahé being the largest) in the Indian ocean. Area: 157 sq.mi. Pop.: (1947 census) 35,232, mainly Negro, with strong admixture of Indian and Chinese; Europeans fewer than 1,000. Language: English; creole *patois* based on French in general use. Religion: *c.* 66% Roman Catholic; also a considerable Anglican congregation. Capital, Victoria (pop. *c.* 7,000). Administration: governor; executive council; Legislative Council, 6 official, 4 elected and 2 nominated members. Governors (1950): P. S. Selwyn-Clarke; J. D. Bates (temporary from Aug.).

History. After the storms of 1949 centring round C. Collet, the former acting attorney general, comparative peace returned to the politics of the colony, though an echo of the affair was heard in February when Mr. Justice Lyon declined to try a sedition case before him for reasons connected with a speech made in the House of Commons by David Rees-Williams, then under-secretary for the colonies, which, in the chief justice's opinion, infringed upon the independence of the judiciary. Work on the new trans-island road on Mahé from Victoria to Grand Anse was more than half completed by October and it was already proving possible to exploit the timber resources of considerable areas of hitherto inaccessible crown land. The scheme for improving water supplies was held up by delay in acquiring the necessary catchment areas.

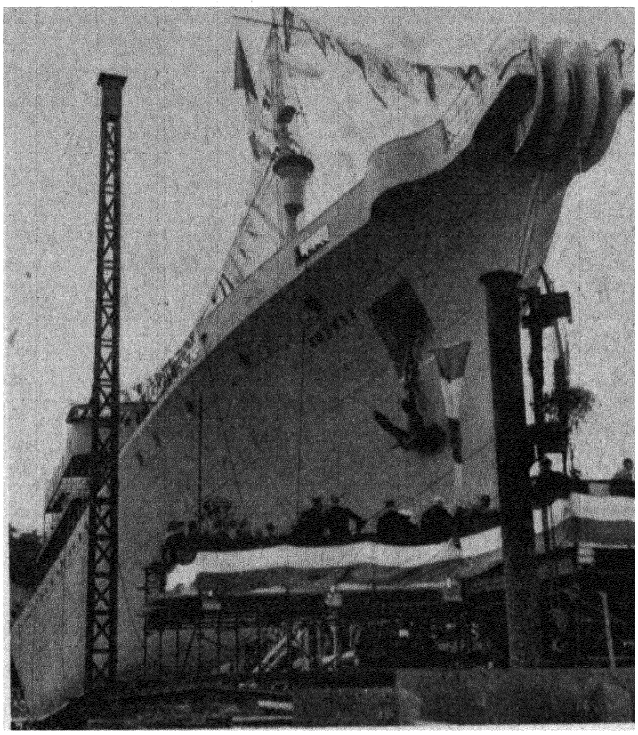
Finance and Trade. Currency: Seychelles rupee divided into 100 cents (1 rupee=1*s.* 6*d.*). Budget (1950 est.): revenue Rs. 3,612,932; expenditure Rs. 3,511,592. Foreign trade (1949): imports Rs. 5,089,418; exports Rs. 5,431,751. Principal exports: copra, guano, oils, tortoise shell, vanilla, calipee. (K. G. B.)

SHEEP: *see* LIVESTOCK.

SHEPPARD, SIR JOHN TRESIDDER, British classical scholar (b. London, Nov. 7, 1881), was educated at Dulwich college and King's college, Cambridge. He was a fellow of King's, 1906-33, Brereton reader in classics in Cambridge university, 1931-47, and became provost of King's and senior fellow of Eton college in 1933. He also received honorary fellowships of New college, Oxford, and Queen Mary college, London. His published works include *Greek Tragedy*, *The Pattern of the Iliad*, works on Aeschylus and Sophocles, and verse translations of several Greek plays. In the Birthday Honours, June 1950, he received a knighthood for his services to Greek literary studies.

SHIPBUILDING. British shipbuilding ended the year 1950 with prospects brighter than those with which it had begun it. After something of a lull in contracting for new shipping in 1949 there was a marked improvement in the early months of 1950 which was maintained throughout the year. About half of the orders during the year were for tankers, but there was a welcome revival in the ordering of dry-cargo tramps and liners. This was prompted by activity in the freight markets during the second half of the year.

By the end of the first quarter of 1950 the tonnage being built in the United Kingdom had fallen from a peak figure of 56% of total world tonnage under construction (June 1948) to 40·5%. As shipyards on the continent of Europe were again equipped for building after the repairing of the extensive damage caused during World War II the amount of shipbuilding in them had been bound to increase. Some of the rehabilitation of the shipyards was promoted by U.S. aid. Of the total shipping, amounting to 4,700,000 tons gross, which was being built throughout the world at the end of March 1950, the volume under construction in the United Kingdom was 1,895,000 tons gross, showing a long lead over shipbuilding in other countries. France ranked second with 474,000 tons, the United States third with 442,000 tons and Japan fourth with 390,000 tons. The Japanese figures compared with only 120,000 tons at the end of the previous quarter and evidently the sharp increase was attributable to some extent at any rate, to the inclusion of pent-up work which was reckoned in the figures for the first time. This sudden expansion placed her ahead of the Netherlands and Sweden, whose totals were 315,000 and 311,000 tons respectively.



A cable ship, "Ampère," being launched at Rouen, France, on July 1, 1950.

A distinguishing feature of the British work was that 38% of the tonnage under construction was for overseas owners whereas French shipyards were mainly occupied with the rebuilding of the French mercantile marine and only 1% of the output was for shipping of other nationalities. One-half of the tankers being built throughout the world were under construction in the United Kingdom. Many vessels had been ordered on Norwegian account.

For the first three months of the year contracts were received by British builders for shipping representing 420,000 tons gross. This compared with orders for 438,000 tons received during the whole of 1949. At the end of the third quarter the amount of shipping under construction in the United Kingdom had increased to 2,046,000 tons gross and the shipping being built throughout the world had risen to 4,839,000 tons. The United Kingdom's share was rather higher at 42%, and the proportion of the new world tanker tonnage being built in the United Kingdom was 56%, the highest for more than two years. This type of shipping represented 54% of all the shipping being built there. France again took second place with 454,000 tons of vessels of

MERCHANT SHIPS UNDER CONSTRUCTION IN THE WORLD (Oct. 1950)

Country of Building	No. of vessels	Gross tonnage	Country of Building	No. of vessels	Gross tonnage
Great Britain	323	2,965,920	Denmark	45	273,274
Sweden	129	1,050,980	Norway	52	266,724
France	77	473,819	Spain	23	109,668
Netherlands	58	446,320	Belgium	19	101,557
United States	30	420,270	Australia	7	39,330
Japan	58	355,570	Canada	3	39,300
Italy	39	353,188	Finland	5	8,750
Germany, West	82	280,793	Ireland	1	1,300
			Total	951	7,186,763

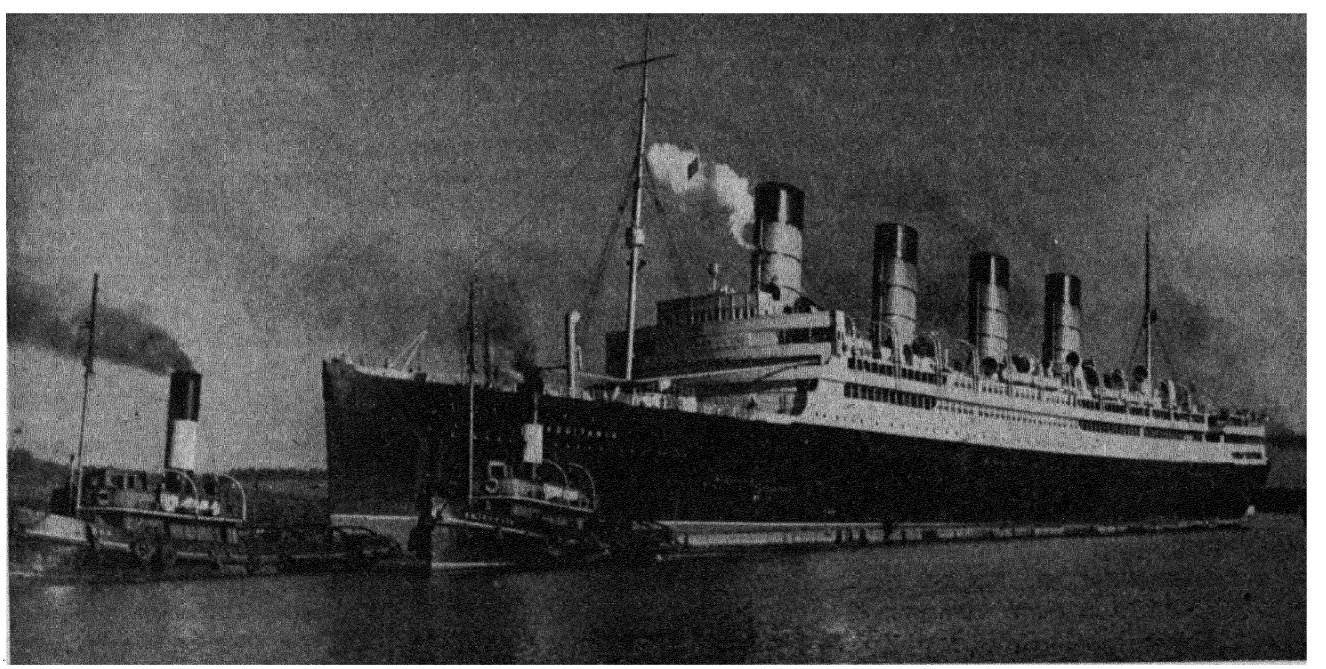
various descriptions under construction and, measured by the totals being built, the other countries in order were Japan, Sweden, the Netherlands, Italy and the United States. At the end of the third quarter British shipbuilders had under construction, or on order, 427 British vessels, representing 2,150,000 tons gross and an estimated value at current prices of £180 million. There were also orders from abroad for 148 ships of 1,162,000 tons representing £90 million and making a total for all the shipyards in the United Kingdom of 575 vessels of 3,312,000 tons gross and an estimated value of £270 million.

On Sept 30, 174 oil tankers of 1,974,000 tons were on the order books of British shipbuilding companies, representing 59½% of the total of 575 vessels of 3,312,000 tons. The number of tankers ordered by British owners was 97% of 1,038,000 tons, while 77 tankers of 936,000 tons had been ordered by foreign owners. The heavy contracting for this type of ship reflected the continually expanding demand for oil transport. The great oil producing and distributing companies had lost ships heavily during World War II. In 1949 these were replaced. The companies continued to enlarge their fleets. They had many uses for their funds, including the construction of large refineries ashore; and their policy had been not to build their tanker fleets up to maximum requirements but to rely for a proportion of their needs on the chartering of free vessels. Thereby they limited the problem of manning immense fleets. They had been willing to charter ships for a period of years. Norwegian owners had been accustomed to expand their tanker fleets by negotiating long-term charters when they contemplated construction. British owners were slow to do likewise. In 1950 several British firms that had previously restricted their activities to the ownership and management of dry-cargo ships embarked on the ownership of oil tankers. Their risks were limited owing to the assurance they had that the vessels would be employed profitably for several years. They were relieved of the cares of management. Some owners of free tankers had been prepared to keep a portion of their fleets available for voyage charters and were thus able to take advantage of exceptional high rates for particular voyages when these occurred as they did during 1950. (C. MN.)

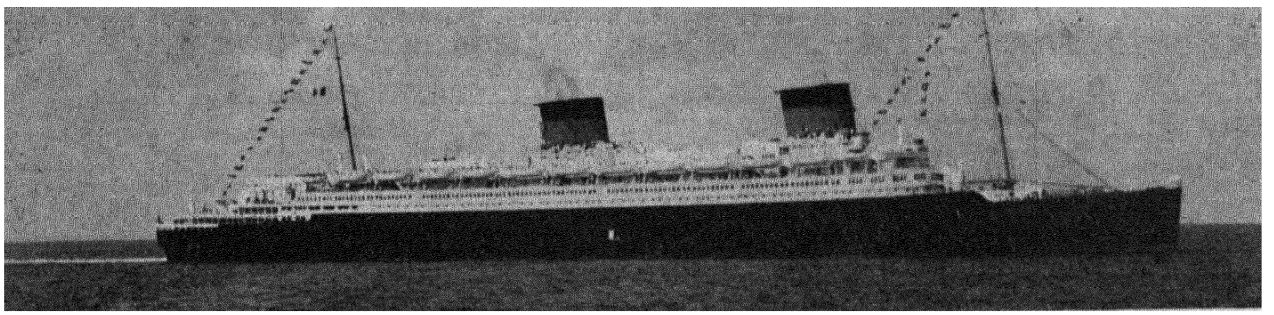
United States. On Jan. 1, 1950, a total of 38 seagoing commercial vessels were under construction in private seaboard shipyards aggregating 620,000 gross tons, and one dredger with a displacement of 21,572 tons. The oil tanker construction programme of about 62 vessels, contracts for which were awarded during 1948, still constituted a substantial part of the shipbuilding in 1950. These tankers, ranging from 26,000 to 32,000 D.W.T. (dead weight tons), as compared with the 16,600 D.W.T. tankers of World War II, would carry the volume of 1,000 tank lorries—a train eight miles long.

World. The total of 74,999,000 gross tons of vessels in the world merchant marine was an increase of 4,400,000 gross tons since June 30, 1948, but the United States fleet during the same period decreased by 128 vessels, aggregating 576,000 gross tons. The remainder of the world, however, gained more than 4,900,000 gross tons of shipping. The Shipbuilders Council of America reported, as in Oct. 1950, 951 merchant vessels each of 1,000 gross tons or more, aggregating 7,186,763 gross tons, under construction in the various maritime nations of the world, as shown in the table. (*See* also SHIPPING, MERCHANT MARINE.) (H. G. S.)

SHIPPING, MERCHANT MARINE. Further progress was made during 1950 in the resumption of services interrupted by World War II. This was promoted by the return to British companies of liners reconditioned after war service and by the delivery of new ships. Some of the ships which were re-commissioned had been directed, before being refitted, to meet part of the heavy demand for transport that had accumulated in a number of routes for several years. Among these was the liner " Rangitane " (22,000 tons gross)



The Cunard White Star " Aquitania " (44,768 tons) passing into Gareloch on the Clyde in Feb. 1950 on her way to the breaker's yards. She was commissioned in May 1914 and had steamed more than 3 million miles.



The French liner "Liberté" (49,000 tons) which made her first postwar voyage as a passenger ship in 1950. She was formerly the German liner "Europa."

built for the New Zealand Shipping company's service between the United Kingdom and New Zealand and distinguished, like her sister ship "Rangitoto" (completed in 1949) by having only one class of accommodation with a wide range of fares. Another was the Peninsular and Oriental Steam Navigation company's liner "Chusan" (24,000 tons gross) commissioned in the late summer of 1950 for the far east route. The liner was exceptional among P. and O. ships in being fitted with fins with a view to reducing rolling in heavy seas. The French Line commissioned the "Liberté" (49,000 tons gross), previously the German liner "Europa" which was delivered to France as reparations. She returned to the North Atlantic route in time to participate in the closing weeks of the busiest North Atlantic season ever experienced.

The appearance of the turbine liner "New Australia" in the special fleet of ships fitted to carry migrants from the United Kingdom to Australia marked the completion of one of the greatest feats of reconstruction ever undertaken. The ship was originally the "Monarch of Bermuda," owned by the Furness line, and was so seriously raked by fire when she was about to be refitted after war duties that the marine underwriters settled a claim for constructive total loss. The cost of reconversion was very heavy. The last of the "Strath" liners of 22,000 tons gross was returned to the P. and O. fleet after war service and likewise the "Empress of Scotland" (26,000 tons) was re-commissioned by the Canadian Pacific for their transatlantic service.

The work of refitting liners required much time and the cost was great. In several instances the reconversion extended over 12 months and the cost exceeded the original price of the ship. The expense was borne by the British government and the owners in proportion according to whether it was incurred in putting the ships into a condition similar to that in which they were before they were requisitioned for war service, or whether the expenditure was for carrying out improvements or alterations desired by the owners. Spokesmen for the leading British companies emphasized in their annual statements during 1950 the seriousness of the great rise in cost in the replacement of ships which had become obsolescent or were approaching that stage. This presented greater problems than the replacement of war losses. With these, owners had the benefit of the proceeds of war insurances which when war was threatened in 1939 they had increased. With ageing ships owners found that the depreciation allowances calculated over the years on ships which cost far less to build only went part of the way to meet the cost of new tonnage. This wide gap had to be met by drawing on funds which had been placed to reserve. This process could not be carried on indefinitely, and chairmen of British companies urged that they should be permitted to set aside sums for reconstruction before they were assessed for taxation.

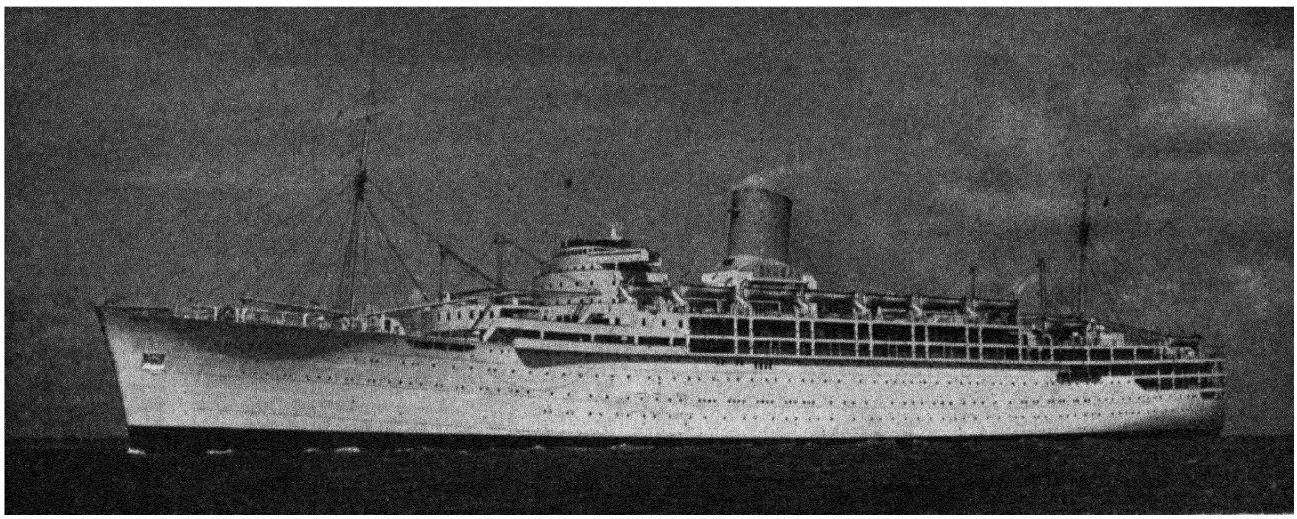
Recourse was had by some shipping companies to building fewer but larger and faster ships which would be able to carry at least as many passengers as more ships smaller and slower, but would provide fewer opportunities of sailing. This plan assumed, however, that the handling of the ships in port would be as speedy as before World War II, and the assumption was not justified. In many ports throughout the world working was slower, in some countries and ports it was more unfavourable than in others. All kinds of attempts were made to improve the rate of discharging and loading cargo and, in the absence of success companies raised freight rates either by means of temporary surcharges or by a general upward revision with a view to recouping part of the losses caused by the waste of ships' time in ports.

Sir William Currie, the P. and O. chairman, stated that the company's proposed full programme when the time came for all the existing ships to be scrapped required nine vessels, of which so far only two had been ordered. The increase in the cost of a passenger ship on the estimates given to the company in 1945 was not less than 40% and was serious enough to force it to curtail its plans. The new liner "Himalaya" (28,000 tons), delivered in 1949, was believed to have cost £3,500,000 and the "Chusan" (23,000 tons), delivered in 1950, £3,250,000. A further complication, the P. and O. chairman said, was that if the delays continued and time saved by faster steaming was lost in port the company would need more than the nine ships suggested. This meant an additional heavy investment of capital without any compensating extra earnings.

From June 1 the British lines serving New Zealand imposed a levy of 7½% on all cargo discharged at Auckland, where delays had been particularly long. They hoped that this would have the result of bringing about improvement. The lines serving the trade between the United Kingdom and the continent of Europe and Australia levied a surcharge of 10% on all cargo because of continued delays in ports and increased working expenses. The companies in the New Zealand trade did not follow suit as they thought that more time should be allowed for the effect to be seen of the surcharge previously levied on shipments to Auckland.

Notice was given by the U.S.-South African conference that freight rates between the U.S. and South African and east African ports would be raised by 15% from Jan. 1, 1951. Several British companies were included in the conference which, together with an independent American operator (the Robin Line) attributed the increase to continually mounting operating, loading and discharging costs, both in Africa and the U.S. Later the U.S. and British lines in the conference concerned with services between the U.S. and India, Pakistan, Ceylon and Burma stated that rates would be raised by from 6 to 10% from Jan. 15, 1951.

Higher rates between the United Kingdom and Brazil, Uruguay and Argentina were announced by nine British and Argentine lines to take effect on Feb. 1, 1951, and the British and foreign lines engaged in the trade between the European continent and those countries stated that rates



The Peninsular and Oriental Steam Navigation company's "Chusan" (24,000 tons) which was commissioned in 1950 for service between Great Britain and the far east.

would be raised on Jan. 1, 1951. Congestion was then beginning to reappear at Rio de Janeiro and cargo ships were being subject to delays for several days.

Active export trade from the United Kingdom meant that throughout 1950 the regular lines in various routes had to charter tramp tonnage to supplement their own services. This applied particularly to the Australian, New Zealand and west African trades. Consequently charter rates advanced. The beginning of the war in Korea towards the end of June gave an impetus to the demand for cargo ships. A number of vessels were acquired for purposes connected with the operations; and rearmament meant a much increased movement of commodities. Freight rates, which fell to low levels at the end of 1949, gradually improved in 1950 and in the second part of that year increased sharply. There was employment for all available vessels and owners were able to choose between various offers. One of the few directions in which freight space was not put to good advantage was in the homeward route from South America where, during the second half of the year, valuable refrigerated ships returned to Europe with their insulated holds bare of meat because of a deadlock in negotiations between the United Kingdom and Argentine governments about the purchases of meat. (C. MN.)

United States. U.S. flag ocean-going merchant vessels of 1,000 gross tons and over in active operation on Sept. 30, 1950, totalled 1,082 of 13,152,000 dead weight tons, not including those under military control. This was more than 1 million tons less than the active fleet on Sept. 30, 1949. Privately owned vessels numbered 1,026 of 12,608,000 dead weight tons; government-owned vessels chartered to private operators numbered 56 of 544,000 dead weight tons, excluding those chartered to the military sea transportation service. There were 57% of the vessels in foreign trade; U.S. flag vessels carried 45% of U.S. cargo in 1949.

Until the Korean emergency, the chartering of government-owned ships had been steadily declining. The drop in relief cargoes, the greater activity of foreign fleets, rising costs and falling freight rates had led to the withdrawal of most of the government-owned ships, until only 54 were active on June 30, 1950.

The war in Korea put a heavy demand on United States shipping. Some of the needed vessels were supplied by private operators, but 152 of them were withdrawn from the government's national defence reserve fleet of laid-up vessels. Of these vessels 22 were turned over directly to the navy's military sea transportation service for use as troop ships and for other special military needs; the other 130 were chartered to private U.S. operators, who supplied crews and stores and time-chartered the ships to the military sea transportation service.

Other vessels in the reserve fleet were being repaired under an $18 million programme in case of future emergency. The nine reserve fleet sites held a total of 2,098 vessels on Sept. 30, 1950, of which more than 1,600 were slow Liberty ships. Up to Sept. 30, 1,813 ships of the government-owned war-built fleet had been sold, 1,113 to other countries and 700 to U.S. operators.

There were 22 ocean-going ships of 558,790 dead weight tons built in the United States from Jan. 1 to Sept. 30, 1950. All of these were privately constructed; 20 of them were tankers. Six passenger or combination passenger-cargo vessels, contracted for with the aid of government subsidies, were under construction. Three of these vessels, however, were to be completed as troopships at the request of the national defence establishment. Two new-type cargo vessels were being planned by the government: one, which was nearing completion and was expected to serve as a replacement type for vessels becoming obsolete; the other was intended to serve as a model for a cargo vessel suitable both for peacetime service and as a military auxiliary. (E. L. Co.)

World. The world tonnage of merchant ships of 1,000 gross tons or more, as of June 30, 1950, was distributed among the principal maritime nations as shown in the table. (*See* also SHIPBUILDING.) (H. G. S.)

WORLD MERCHANT SHIPPING

Country	No. of vessels	'000 gross tons	Country	No. of vessels	'000 gross tons
United States*	3,516	26,114	Sweden	539	1,794
British Commonwealth	3,109	18,869	U.S.S.R.	437	1,365
Norway	945	4,988	Greece	227	1,268
Panama	485	3,417	Japan	308	1,214
France	511	2,825	Denmark	303	1,082
Netherlands	493	2,775	Other Countries	1,771	6,875
Italy	406	2,413	Total	13,050	74,999

* Excludes vessels operating on the Great Lakes, but includes vessels laid up in reserve.

SHOE INDUSTRY. The beginning of 1950 found the British shoe industry very conscious that there was a buyers' market. Manufacturers' stocks were not heavy, demand was still good and there were no signs that prices of raw materials were declining; rather was the reverse true. It seemed that the problem would be to negotiate a period of rising prices without arousing serious "consumer-resistance" and the

industry set about trying to equate prices and the public's purse. Free competition was regarded as the best way to do this and there was a movement to end the complicated system of price limits imposed under the utility footwear scheme. It was soon apparent that stocks of leather in the hands of shoe manufacturers were not sufficient to let these price ceilings remain for long. Either prices had to go up or quality to come down. In addition to raw material price-increases, retail selling costs also were rising. It was hoped that control both of production and distribution would cease. The year had not advanced very far, however, before there began to be indications that buyers, hesitant about higher prices, were ordering cautiously and short time was experienced in some factories. At about this time it became evident that the devaluation of sterling had upset calculations that the freeing of hide-buying from government control would produce lower prices. There were advances of 10% to 15% in leather prices and shoe manufacturers found that they needed 3*s.* to 4*s.* a pair more for their products, even after resorting to the averaging of leather prices to hold quotations down to the level of the public's purse.

The intervention of the general election delayed negotiations with the Board of Trade. Distributors found themselves with heavy stocks and a declining demand. Dormant capital was causing anxiety. One large company reported that its stock values were up by £738,000 and that its liquid cash resources were causing concern. Buyers' orders declined by about 40%.

On May 10, it was announced that the president of the Board of Trade had decided that in view of the ample supplies of footwear available and the return of competitive conditions to the trade the existing method of price control on utility footwear could be considerably simplified. The system of maximum prices for individual specifications of footwear, calculated by reference to margins, manufacturers' costs of production and wholesalers' and retailers' purchase prices, was replaced by ceiling prices for broad categories of footwear on sale to the public. There were no increases in the prices of the cheapest types of footwear. Small increases were allowed for medium grades and larger increases for the more expensive types. These changes affected altogether about 90% of the total footwear production, leaving the rest subject to purchase tax. The ceiling price for men's shoes was 85*s.* 3*d.* (boots 94*s.* 6*d.*) and for women's 79*s.* (boots 97*s.* 6*d.*) with percentage additions for multiple-fitting ranges. Although these prices became effective on May 25 it soon became apparent that the public was not prepared to pay prices up to the permitted level, and the trade adopted a policy of holding prices down.

Leather prices however, continued to rise and an increase in the retail prices index resulted in higher wages for shoe operatives in July. At about that time a revival of retail demand made itself felt and stocks in distributors' hands ceased to cause concern. The latter months of the year saw leather prices rising to phenomenal heights and shoe manufacturers striving, by averaging their costs, to keep prices down. Retail prices current were much below replacement values and the need for still further increases in utility ceiling prices early in 1951 seemed unavoidable. (*See* also LEATHER.)

(C. A. SD.)

SHOPS AND DEPARTMENT STORES. The year 1950 was a difficult one for retailers almost everywhere. In Great Britain the first six months saw the full return of the buyers' market, and retailers were primarily concerned with maintaining sales. Every endeavour was made, in face of the inflationary situation that followed the devaluation of sterling in Sept. 1949, to bring prices down. In the event it meant that the big retailers were able to maintain their sales and even to increase them, while the small independent shopkeeper lost ground in almost every branch of the trade.

Supporting evidence for this was to be found in the retail trade index issued by the Board of Trade and in the official estimates of consumer spending: in the first six months of the year the public spent about £256 million more than in the corresponding period of 1949; of this total more than £150 million extra was spent on food and only £6 million more on clothing. These figures showed that the public's spending habits were changing: people spent the greater part of their increased incomes on food so as to take advantage of the greater variety available, although the prices were high; and since the bulk of food distribution was in the hands of the co-operative societies and the big multiple chains, it was these organizations which benefited most from the higher spending. A similar trend was evident in clothing sales: as the sales of the biggest chains in the textile trades rose by more than the total increase in consumer spending on clothing, the independent firms must have suffered a considerable setback.

In the United States conditions were similar: in the first half of the year sales were only slightly above the previous year. Experience on the European continent followed the same pattern. In Australia inflation was severe and, while retail sales were higher than before, costs also rose sharply.

The outbreak of the Korean conflict in June changed the picture completely. Expectation of controls and shortages lead to panic buying in many countries. In the United States sales in department stores rose during July by more than 40% above 1949 levels. Similar panic buying was not evident in Great Britain but was very heavy in Belgium and in some of the Scandinavian countries. But when the panic buying was over, retailers found themselves faced with the prospect of shortages of vital supplies and with an increase in wholesale prices caused by very high prices of raw materials. These conditions were particularly evident in textiles and in merchandise using non-ferrous metals. The price of raw wool reached record levels when the September auctions opened; the cotton supply was limited both by the poor crops in the U.S. and in South America and by the stock-piling programmes of various countries, so that prices rose likewise (Egyptian cotton reached record price levels); and tin, rubber, copper and other raw materials became costly and scarce. All the western countries greatly expanded their armaments programmes, and supplies for retailers, though not affected to any great extent in 1950, seemed likely to become scarce in the near future. Consequently firms bought heavily.

The inflation set in motion by the new defence programmes meant higher operating costs and a growing reluctance on the public's part to buy high-priced merchandise. Again the large shops which handled low-priced mass-produced merchandise were in a very strong position and their advantage was increased by their connections with the manufacturers and the consequent ease of getting supplies.

Conditions did not favour developments in buildings and re-equipment. Building licences were still difficult to get and though some new modern stores were built, the most that the majority of firms could achieve was some remodelling of existing premises. In the second half of the year an acute shortage of packaging materials resulting from difficulties in obtaining supplies of paper and board meant that plans for the expansion of self-service had to be postponed. (*See* also BUSINESS REVIEW.)

(J. BX.)

SHOWS: *see* FAIRS, SHOWS AND EXHIBITIONS.

SIAM: *see* THAILAND.

SIERRA LEONE. British colony and protectorate on the west coast of Africa, bounded N. and E. by French Guinea and S.E. by Liberia. Area: 27,925 sq.mi. Pop.: (1931 census) 1,768,480; (1947 census) 1,858,275, incl. 964

Europeans and 2,074 Asians. Language: many Negro tribal dialects; Hausa. Religion: protectorate, mainly pagan with Moslem minority; colony, mainly Christian. Capital, Freetown (pop., 1946 est., 64,576). Administration: governor; executive council, 4 *ex officio* members, 4 appointed by the governor from elected members of the Legislative Council; Legislative Council, 7 official members, 19 elected (7 from the colony), 2 nominated by the Protectorate Assembly, 2 appointed by the governor (trade and commerce). Governor, Sir George Beresford-Stooke.

History. The introduction of a new constitution, under discussion since 1948, was held up in 1950 by the failure of the unofficial members of the Legislative Council to agree on various issues, especially the relative representation of the colony (pop. 124,657) and the protectorate (pop. 1,733,618). The inhabitants of the colony, which includes the capital Freetown, were for the most part descendants of liberated African slaves brought there from Nova Scotia or the United Kingdom, or from slavers captured by the naval patrols in the suppression of the slave trade. The indigenous peoples of the protectorate had no natural links with them and had begun to produce an educated element which sought a larger voice in the conduct of Sierra Leone affairs, but the political leaders of the colony feared what they professed to regard as the probably reactionary influence of protectorate members, many of whom might be chiefs.

In April the governor appealed to both parties to agree to the appointment of a committee to find a compromise, but without success; and in July the United Kingdom government agreed that the scheme proposed in 1948 should be brought into force, with some modifications. It was left for later consideration whether the four unofficial members of the executive council should hold portfolios. Although the level of literacy in the protectorate was lower than in the colony, all members of the Legislative Council were required to be literate in English. This, together with the decision that protectorate elections should be through the district councils, was expected to make it less likely that all candidates for election to the Legislative Council would be chosen exclusively from the traditional rulers.

A long-standing dispute about the status and future of Fourah Bay college, the oldest institution of higher education in West Africa (founded in 1827 and affiliated to Durham university since 1876) was ended by new legislation ensuring that the university department of the college would be maintained and establishing a representative college council responsible for the supervision of college policy and the preparation of its annual budget, which would require the approval of the Legislative Council. This provision was the only limitation on the autonomy of the college. A new plan of economic development was published in February. It recommended the setting up of 50 pioneer mills for the improved extraction of palm oil and kernels, further development of swamp-rice cultivation, improvements to the railway and the construction of 600 mi. of new roads.

Finance and Trade. Currency: West African pound (£WA 1 = £1 sterling). Budget (1949): revenue £2,757,000; expenditure £2,621,000. Foreign trade (1949): imports £6,171,910; exports £4,703,582. Principal exports: palm kernels, diamonds and iron ore. (K. E. R.)

SIKKIM. Semi-independent state in the eastern Himalayas lying between Nepal to the W. and Bhutan to the E. on the southern border of Tibet. Area: 2,745 sq.mi. Pop.: (1941): 121,520, of whom the majority are Nepalese by origin; the other races are chiefly Bhotias of Tibetan extraction (10,980) and Lepchas or Rongpa (13,060) of Indo-Chinese origin, believed to be the earliest inhabitants of the country. The state religion is Buddhist of lamaistic type but most of the Nepalese are Hindu. Capital, Gangtok. The ruling family is Tibetan. Maharaja (from 1914), Tashi Namgyal.

During the year the government of India formally succeeded the British government as the protector of Sikkim. On the transfer of power to India in Aug. 1947, a standstill agreement had been negotiated, whereby Sikkim's external affairs, communications and defence became Indian responsibility, pending a permanent settlement. In 1949 internal disorder led the maharaja to call upon India for assistance. Troops were sent to Gangtok and negotiations began for stabilizing relations between India and Sikkim. This was accomplished in the new treaty signed at Gangtok on Dec. 5, 1950. Sikkim secured autonomy in internal affairs but India assumed responsibility for its defence and territorial integrity and would have the right to take such measures as it considered necessary for the defence of Sikkim including the stationing of Indian troops there. The treaty stipulated that the government of Sikkim would have no direct dealings with any foreign power and that India would pay to the government of Sikkim Rs. 300,000 annually. The first payment was made before the end of the year. (E. Hd.)

SILK. The second International Silk congress was held from Oct. 16 to Oct. 21, 1950, in New York. Sixteen silk producing or manufacturing countries were represented by 136 delegates, and the conference consisted of a week of technical, economic and promotional discussions. The raw silk classification system for grading the fibre on the basis of mechanical tests, as developed primarily in the United States, was adopted. A standard of washing practice for silk fabrics and an agreement on a fastness test for underwear silks in pastel colours were also adopted. Improvements in reeling and packaging raw silk was strongly recommended for decreasing the cost of fabric manufacture and for making the silk yarn suitable for use on modern automatic machinery.

Because of the price fluctuations which had taken place following the removal of controls by the occupation authorities in Japan from Jan. 1, 1950, there was much discussion on price stabilization. It was pointed out that silk dealers were not so much concerned with the final price fixed for silk, whether high or low, as they were with limiting its tendency to violent shifting. The Japanese delegates proposed that a private corporation be formed in Japan for the purchase and sale of raw silk in which a minimum-maximum price range for raw silk would be established for a fixed period. The standard prices would be governed by the cost of cocoon and raw silk production, existing market conditions, prices of rayon and nylon and relative consumption. The U.S. government representative at the conference pointed out that such a plan would be inconsistent with the U.S. anti-trust laws, the principle of which governed Japanese trade. The congress, however, voted officially to request the Japanese to study the situation again and prepare a plan, in co-operation with the occupation authorities, which would control the wide fluctuation of prices and yet permit some flexibility. Raw silk prices in the U.S., as reported by the Bureau of Labour Statistics, remained at $2·70 a pound from Jan. 3 to July 28, 1950. Between July 28 and Aug. 10 the price rose to $2·90. By Aug. 11, however, it jumped to $4·00. It dropped again on Sept. 26 to $3·90 but rose

RAW SILK DOMESTIC CONSUMPTION OF PRINCIPAL CONSUMING (Metric tons) COUNTRIES, 1938 AND 1948-50

Country	1938	1948	1949	1950 Jan.-June	1950 July	1950 August
Japan	—	7,609·1	6,906·1	1,369·8*	—	—
France	2,429·4	639·2	815·6	504·2	32·7	40·4
Great Britain	—	—	741·6	331·1	62·3	—
Italy	755	1,107	1,018	495	56	—
Switzerland	200	215	297	200*	—	119†
United States	23,152	3,526	2,170	1,535·4	417·5	498·3

* First four months. † Third quarter 1950.

rapidly from Nov. 8 to the end of the year. On Dec. 8 it was $4·50 a pound.

Proposals to create an international fund for world promotion of silk were discussed and Switzerland reported its agreement on a tax of 25 centimes a pound on raw and thrown silk imported into Switzerland, beginning Oct. 1, 1950, with the understanding that the international body would be in a position to subsidize further such a campaign in the near future. The Japanese, it was announced, were not yet in a position to participate in the proposed plan of a levy on each pound of raw silk exported. (*See* also RAYON AND SYNTHETIC FIBRES; TEXTILE INDUSTRY.) (I. L. BL.)

SILVER. The postwar recovery in silver production was halted in 1949 by a 5% decline in world output, mostly in Mexico. The outputs of the more important producers, as reported by the U.S. bureau of mines, are shown in the table, these countries usually producing about 85% of the world total.

WORLD SILVER PRODUCTION
(in millions of fine ounces, smelter output)

	1946	1947	1948	1949
United States	21·10	38·58	39·23	34·94
Canada	12·54	12·50	16·11	16·94
Newfoundland	1·11	0·96		
Mexico	43·26	58·84	57·52	49·45
Honduras	2·68	2·41	3·17	3·43
Argentina	3·09	2·44	1·20	1·25
Bolivia	6·11	6·23	7·56	6·63
Chile	0·56	0·75	0·86	0·80
Peru	12·33	10·78	9·29	10·63
Belgian Congo	5·05	4·06	3·81	4·55
South Africa	1·20	1·15	1·17	1·16
Australia	9·05	9·53	10·06	9·86
Total	135	168	172	164·5

In the United States, following a decline of 11% in 1949, when 34,675,000 fine oz. were produced, mine production stepped up to 34,772,048 oz. in the first 10 months of 1950—a rate which if continued would result in the largest output since 1942.

In Canada, mine output rose from 16,109,982 oz. in 1948 to 17,641,943 oz. in 1949 and 14,086,898 oz. in the first eight months of 1950. (G. A. RO.)

SINGAPORE, British colony and dependencies comprising the island of that name off the southern extremity of the Malay peninsula together with Christmas Island and the Cocos-Keeling Islands in the Indian ocean. Area: Singapore and adjacent islets 220 sq.mi.; Christmas Island *c.* 60 sq.mi.; Cocos-Keeling group of 27 coral islands *c.* 2 sq.mi. Total pop.: (1947 census) 940,824, incl. 720,133 Chinese, 115,735 Malays, 68,978 Indians, 8,718 Europeans and 17,260 others; (mid-1949 est.) 1,002,000. Administration: governor; executive council; Legislative Council, 4 *ex officio* members, 5 nominated official, 4 nominated non-official, 3 elected by the Singapore, Chinese and Indian chambers of commerce and 9 elected by universal suffrage of all British subjects. The municipal area (30·9 sq.mi.) is managed by a body of 27 municipal commissioners of whom 18 are elected and 9 nominated, with an official president. Governor, Sir Franklin Gimson; United Kingdom Commissioner general in South-East Asia, Malcolm MacDonald (*q.v.*).

History. Singapore in 1950 enjoyed a year of economic prosperity. The city's exports were about 48% in volume above these for 1949. The tonnage loaded and discharged in the port from January to September was 4,422,000 tons compared with 3,584,000 tons in the corresponding period of 1949.

The illegal underground Communist organizations such as the General Labour union, the Singapore Students Anti-British league and the Malayan Communist party carried on an active propaganda campaign supported by sabotage, arms-raids and occasional terrorist murders. Over 40 arson attempts were made and about half of them were successful. An unsuccessful bomb-throwing attempt was made on the life of the governor, Sir Franklin Gimson, on April 28. The Chinese Communist-orientated newspaper *Nan Chian Jit Pao*, was closed on Sept. 21 under an emergency regulation enacted on July 20. The Singapore Chinese high school and the Nanyang girls' school were closed on June 3 after the police discovered in them illegal Communist pamphlets but re-opened on Aug. 14 although subject to stricter control by the Singapore Education Department.

In August the secretary of state for the colonies approved an increase in the number of elected members in the Legislative Council from six to nine. The executive council was also to be strengthened with the addition of two unofficial members. In June registration of voters took place. A total of 58,000 persons out of a possible 225,000 were registered as voters for the Legislative Council, and 22,000 out of a possible 160,000 for the municipal commission. On Dec. 3 elections took place for 6 seats in the municipal commission.

In September a six-year Singapore development plan, to cost £53 million and to include housing, health and education schemes, a new airport and a new power-station, was submitted to the Commonwealth economic aid conference in London. The resultant Colombo plan published in November envisaged that about two-thirds of this amount would be found by Singapore. During 1950 15 new government primary schools were opened in the colony, in implementation of the ten-year education plan.

Litigation started in May over the custody of a Dutch girl, then aged 13, who had been living as a Moslem in a Malay village, caused much feeling among Moslems. The girl, Bertha Hertogh, had been cared for and brought to Malaya by a Malay woman after her parents were interned by the Japanese in Java. While the case was pending she was married by Moslem rites to a Malay schoolteacher. On Dec. 2 the High Court awarded custody to the Dutch parents and declared the Moslem marriage null. From then a campaign of agitation mounted until on Dec. 11, when the Court of Appeal heard an application for a stay of execution of the previous judgement, serious rioting broke out. This continued over Dec. 12 when the court refused the application and the girl and her mother left by air for Holland. By the time it was quelled on the evening of Dec. 13 at least 14 people, including 6 Europeans, had been killed, and 144 injured. The governor announced that a commission of inquiry would be appointed and that an immediate inquiry, to make recommendations affecting the police, would be conducted by D. W. MacIntosh, commissioner of police, Hong Kong.

Education. Government maintained, aided and private schools: English 94 (37,500 pupils), Malay 39 (7,862), Chinese 271 (68,434), Indian 19 (1,315). University of Malaya (1950-51): staff 83, students 791.

Foreign Trade. Imports: (1949) $305 million, (Jan.-June 1950) $808 million; exports: (1949) $1,055 million, (Jan.-June 1950) $776 million. Main sources of imports (1949): Indonesia $255 million, United Kingdom $213 million, Thailand (Siam) $132 million, Sarawak $82 million. Main distribution of exports (1949): the United States $210 million, Indonesia $123 million, United Kingdom $115 million, Australia $66 million, Hong Kong $57 million.

Finance. Currency: Malayan dollar (one Malayan dollar = 2*s.* 4*d.*). Budget: (1949 revised est.) revenue $110,028,209, expenditure $98,154,459; (1950 est.) revenue $102,810,944, expenditure $93,078,128. (D. A. SN.)

SISAL: *see* HEMP.

SKATING: *see* ICE SKATING.

SKIING. On the new jump at Oberstdorf, Bavaria, the world record (120 m., Planica, 1948) was beaten three times during 1950, the new record being 135 m. by Dan Netzell, Sweden. The world championships were organized by the U.S. at Aspen, Colorado; the downhill race and the giant slalom were won by Zeno Colò, Italy, the slalom by

Georges Schneider, Switzerland, the ladies' downhill by Trude Beiser-Jochum, Austria, and both ladies' slaloms by Dagmar Rom, Austria. The special jumping at Lake Placid was won by Hans Björnstad, Norway, the 50 km. langlauf at Romford, Maine, by Gunnar Eriksson, Sweden, the combined jumping by Simon Slottsvik, Norway, who also won the Nordic combined at Holmenkollen. Sweden won the relay race.

The Arlberg-Kandahar, at Murren, was won for the third time by James Couttet, Chamonix, winning all three men's events, double victory for France as the ladies' A-K was won by Mariette Agnel, who also won the slalom, the downhill being won by Idly Walpoth, Davos, who won the ladies' Parsenn-Derby at Davos when Max Bertch, Davos, won the men's event for the third time.

Great interest was aroused by the Oslo Ski association's jump on Hampstead heath in March, for which they imported specially prepared snow and sent some of their best jumpers, Arne Hoel winning the London cup. (R. U. C.)

SKIN DISEASES: *see* DERMATOLOGY.

SLESSOR, SIR JOHN COTESWORTH, British Marshal of the Royal Air Force (b. Rhanikhet, United Provinces, India, June 3, 1897), was educated at Haileybury college, and during World War I served in the Royal Flying Corps in France and the middle east. In 1921-22 he served in India; after holding flight and administrative posts in England he returned to that country in 1933 to take command of No. 3 Indian wing at Quetta, and served in the Waziristan operations of 1936-37. In the latter year he went back to England as director of plans, Air Ministry, a post which he held until 1941 when he became air officer commanding No. 5 Bomber group. In the following year he was appointed assistant chief of the air staff and in 1944 became commander in chief of the Royal Air Force, Mediterranean and middle east, and deputy to the Allied air c. in c. From 1945 to 1947 he was air member for personnel, being promoted air chief marshal in 1946. He was commandant of the Imperial Defence college, London, 1948-49; in the former year he had become air A.D.C. to the King. In Jan. 1950 he was appointed chief of the air staff in succession to Lord Tedder. On June 13 he was promoted Marshal of the R.A.F. In July he attended a meeting of the Western Union defence ministers at Fontainebleau, near Paris, and in September was present at Army manoeuvres in Germany. In 1936 he had published *Air Power and Armies* and in the same year received the Royal United Service institution's gold medal for the best military essay. He was created a K.C.B. in 1943 and a G.C.B. in 1948.

SNOOKER: *see* BILLIARDS AND SNOOKER.

SOAP, PERFUMERY AND COSMETICS. Events in these industries in 1950 faithfully reflected political and economic changes in the world at large. Because of the widespread tendency to conserve edible oils and fats for food, the manufacture of soaps from such materials was still restricted and, by way of compensation, synthetic detergents of non-edible origin were made much more widely available. The three largest soap making concerns kept their places among the world's leading advertisers of consumer goods but concentrated on advertising their synthetic detergents rather than soaps.

World-wide increases in the costs of raw material production likewise affected these industries. Prices asked for many natural flower oils prevented their use in any but the higher grade perfumes. The rising cost of living reacted adversely on the sales of perfumery and cosmetics. In Great Britain however, cosmetic sales rose again towards the end of the year, doubtless in response to heavier expenditure on advertising.

The drive for increased export of British perfumes and cosmetics continued, but encountered the competition of similar drives from the U.S., France and other countries as well as bans and restrictions in most of the Commonwealth countries. Indian manufacturers made considerable technical progress but were faced with high raw material costs and low communal purchasing power. More U.S. firms opened branches in the British market. Import quotas still obtained in Canada but all Canadian restrictions on the import of cosmetics were due to be abolished in Jan. 1951.

Rationing of soap in Great Britain ended in Sept. 1950, but the soapmaker's oil-and-fat quota continued to be controlled. A new plant operating U.S. processes for the fractional distillation of fatty acids (used to make soap, etc.) was completed at Littleborough, Lancs. The first consignment under Marshall aid of machinery for making soap was installed in a factory at West Thurrock, Essex.

Advances included the installation of more efficient plant and processes in the larger soap factories and an increasing degree of specialization in perfumery and cosmetic production. Scientific contributions of potential importance to the cosmetic industry were made by J. H. Schulman and H. Burton in papers read before the Society of Cosmetic Chemists, dealing respectively with oil/water dispersions and the dyeing of keratinous fibres. At Reading university basic research on the sense of smell was inaugurated. In France natural flower oils were successfully extracted using butane instead of petroleum ether. (F. V. W.)

SOCIALIST MOVEMENT. In 1950 Socialism as a world force suffered a slight but general decline. At the election of Feb. 23, the British Labour party in spite of receiving the largest number of votes ever obtained by a party in a British election, saw its absolute majority in parliament reduced from 146 seats to 5.

In all the Scandinavian countries except Finland, the Socialist parties increased their strength. But the Danish Social Democratic party, having failed to win an absolute majority in the elections of Sept. 5, handed over power to a minority coalition on Oct. 26. A fall in support at the presidential elections in Finland on Jan. 16 persuaded the minority Social Democratic government to withdraw from office in favour of a minority right-wing coalition under Urho Kekkonen (March 1).

The French Socialist party continued to feel uneasy in office. On June 24 it helped to bring down the Bidault government because it considered proposals for higher pay to some civil servants to be inadequate. It entered the Pleven government which followed, but the unpopularity of Jules Moch (*q.v.*), the Socialist minister of defence, nearly brought that government down in early December.

In Germany the Social Democratic party began to recover ground by opposing the government's policy on rearmament; it won striking gains in the Landtag elections at the end of the year. In Austria the Social Democratic party strengthened its prestige within the coalition by overcoming a Communist strike movement in October. The Belgian Workers' (Socialist) party led a campaign against the return of King Leopold. The election of March 5 returned the first Socialists ever to sit in a Greek parliament when the Socialist party (E.L.D.) obtained seven seats on a joint list with Ioannis Sofianopoulos. In October the Socialist prime minister of Israel, David Ben Gurion, skilfully overcame a crisis in his coalition government when the religious bloc threatened to withdraw.

In India the Socialist party strengthened its position as the only important democratic alternative to the Congress party. The Burmese Socialist party demonstrated a growing

SOCIALIST PARLIAMENTARY REPRESENTATION IN EUROPE*
(Figures in brackets are those of the preceding election)

	Date of last election	Votes obtained		% of total votes		Total No of seats		Seats obtained by Socialists	
Austria	Oct. 9, 1949	1,621,275	(1,434,898)	38·6	(45·1)	165		67	(76)
Belgium	June, 4, 1950	1,704,360	(1,529,720)	34·5	(29·7)	212		77	(66)
Denmark	Sept. 5, 1950	813,590	(834,089)	39·7	(40·3)	149		59	(57)
Finland	July 1-2, 1948	—	—	—	—	200		54	(48)
France	Nov. 10, 1946	3,454,080	(4,198,110)	17·9	(21·1)	619		93	(129)
Germany, Western	Aug. 14, 1949	6,932,272	—	28·5	—	402		131	(—)
Great Britain	Feb. 23, 1950	13,295,736	(11,992,292)	46·4	(48·2)	625	(640)	315	(393)
Greece	March 5, 1950	—	—	—	—	250		7	(0)
Iceland	Oct. 23, 1949	11,938	—	16·5	—	52		7	(9)
Ireland	Feb. 4, 1948	—	—	—	—	147		14	(12)
Italy	April 18-19, 1948	1,860,528	—	7·1	—	574		33	(—)
Luxembourg	June 6, 1948	—	—	—	—	51		14	(11)
Netherlands	July 7, 1948	1,263,366	(1,347,940)	26·1	(28·6)	100		27	(29)
Norway	Oct. 10, 1949	800,792	(609,255)	45·8	(41·2)	150		85	(76)
Sweden	Sept. 19, 1948	1,789,440	(1,436,571)	46·5	(46·6)	230		112	(115)
Switzerland	Oct. 27, 1947	—	—	—	—	194		48	(55)

* Only European countries having a parliamentary system and free elections are included.

goodwill towards Great Britain by sending its secretary general, U Ba Swe, to London for a short visit as the guest of the Labour party. In the Japanese elections to the House of Councillors (Upper House) on June 4, Socialists recovered much of the ground they had lost in the elections to the Diet on Jan. 23, 1949.

The International Socialist conference held one plenary session in Copenhagen on June 1-3. Its committee (Comisco) met in Hastings, March 18-19, and in Paris, Oct. 21-22.

On Dec. 11, 1949, immediately after the Italian Socialist Unification congress in Florence, Comisco had admitted the Partito Socialista Unitario to membership of the International Socialist conference and warned the Partito Socialista dei Lavoratori Italiani, led by Giuseppe Saragat, that it would be expelled if it did not swiftly unite with the P.S.U. When Comisco met again in March, however, the P.S.L.I. exploited the obvious reluctance of the P.S.U. to make any further concessions for the sake of unity and thus recovered the support it had lost by breaking its promise to join the Florence congress. When the full conference met at Copenhagen the P.S.U. had clearly failed to win mass support from the Italian workers and was little, if at all, stronger than the P.S.L.I. Many of the European Socialist parties felt more sympathy with the political views of the P.S.L.I. than with those of its rival. In any case both the P.S.U. and P.S.L.I. contained groups which believed that unification might be negotiated providing the extremists in their parties did not exploit the ignorance of an arbitration commission from Comisco. So the conference decided to admit both Italian parties as full members on the understanding that this should not constitute a precedent for admitting more than one party from each country. It also decided to refrain from any further intervention unless invited by all concerned. Later in the year, when the P.S.L.I. grew more dissatisfied with its position in the government and Ignazio Silone replaced Ugo Mondolfo as secretary general of the P.S.U., the two parties agreed in principle to hold a unification conference early in 1951, but the chief factor now promoting unity was the growing weakness of both parties.

At Hastings Comisco considered statements on the Saar problem made by representatives of the Socialist parties of France, Germany and the Saar. A sub-committee drawn from the Dutch, Belgian and Swiss parties submitted an independent report on the Saar to the full conference at Copenhagen, which suggested that economic authority in the Saar should be handed over to a supra-national European authority.

The International Socialist conference demonstrated its opposition to Communism many times in 1950. At Copenhagen, Morgan Phillips, the secretary of the British Labour party, opened a public discussion on Socialism and peace, in which he named the Soviet Union as the main enemy to world peace and called for unity throughout the free world to resist aggression, stabilize international trade and raise living standards. His main points were supported by nearly all the other speakers except the Swedish prime minister, Tage Erlander, who insisted on Sweden's right to armed neutrality, and Guy Mollet, secretary general of the French Socialist party, who argued that western Europe should be developed as the basis of an independent political force in world politics. After hearing a long report from the S.P.D. (Sozial-Demokratische Partei Deutschlands) on concentration camps and forced labour in the Soviet zone of Germany, the conference passed a resolution calling for the re-establishment of human rights, particularly in the Cominform countries and in Spain. The conference also published protests against the persecution of Socialists in the Soviet-dominated countries. In return the Cominform accused the British Labour party of organizing the International Socialist conference as an instrument of aggressive American imperialism.

It had been agreed in 1949 that the Socialist parties could not consider reorganizing a formal Socialist International until they had first agreed on a general statement of their common principles. The ethical and pragmatic approach of the British and Scandinavian parties contrasted strongly with the traditional Marxism of the French when the Copenhagen conference debated these principles. A study group was set up to draft an agreed text.

The Paris meeting of Comisco marked the highest point in political discussion at any international Socialist meeting since 1946. After a general review of the Schuman plan and of different party attitudes towards the problem of European unity, there was a debate on German rearmament in which the Dutch delegation presented the case for the U.S. view, while the French and German delegates made their separate cases against it.

Problems of European unity were under discussion throughout the year. The Labour party's policy statement *European Unity* published on June 13 excited much adverse comment among the continental parties. At the second session of the consultative assembly of the Council of Europe opposing Socialist conceptions of European unity clashed in public. The British and Scandinavian parties, though unwilling themselves to go beyond inter-governmental co-operation on the basis of mutual consent, declared that they would neither encourage nor obstruct the formation of a continental federation without them. Most of the continental Socialists, led by Guy Mollet, though federalist in principle, opposed the formation of a partial federation on the grounds that it would split Europe, would be both clerical and reactionary in political complexion, and would be dominated by Germany. A minority of continental Socialists led by André Philip, also of the French party, considered that a continental

federation should be formed forthwith. However, when in Rome the committee of ministers accepted in principle the Assembly's call for the creation of specialized agencies by partial agreements within the framework of the Council of Europe, the European Socialists agreed to sink their differences and to adopt the functional approach.

The Socialist parties held several successful expert conferences at which they could explore common problems together without committing themselves formally to any conclusions. An expert conference held at Witten, Germany, on March 26-31, proposed an international organization for European coal and steel. On June 16-18 a further conference in London considered Robert Schuman's proposals in this field and welcomed them with certain reservations. From Oct. 29-Nov. 3 the Socialist parties held in England their first international conference on methods of party organization and propaganda. On Dec. 4-8 Socialist experts met in Paris to discuss the liberalization of European trade.

In general 1950 showed marked progress in the development of the International Socialist conference and its ancillary bodies as a discussion forum. But by abdicating responsibility for the unification of Italian Socialism the conference surrendered its last claim to direct influence over the affairs of a member party.

Three major figures in world Socialism died during the year. Harold Laski and Léon Blum, both Jewish intellectuals of middle class origin, distinguished for generous internationalism in thought and action, died within a week of one another on March 24 and March 30. George Bernard Shaw, a powerful influence in the development of Fabian Socialism, died on Nov. 2. (*See* OBITUARIES.)

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(D. W. H.)

SOCIAL SECURITY, U.S. The most important development was the enactment by congress of the Social Security act amendments of 1950, signed by President Harry S. Truman on Aug. 28. The new provisions—some effective immediately after adoption of the legislation and almost all effective before June 1951—made substantial revisions in old-age and survivors insurance and strengthened public assistance and the maternal and child health and child welfare services.

Benefits under the old-age and survivors (administered by the Federal Security agency) programme were being paid at the end of June 1950 to 2,900,000 persons at a monthly rate of $60,700,000. The average monthly benefit for a family of a widowed mother and one child beneficiary was $36·70; for an aged widow, $20·90; for a retired man, $26·80; and for a man and his aged wife, $41·90.

Effective on Jan. 1, 1951, coverages—formerly limited in general to workers in industry and commerce—were extended to include the self employed (except farmers and those in certain professions); regularly employed agricultural and domestic workers; and, under special arrangements, employees of non-profit institutions and employees of state and local governments not already under a retirement system. Certain civilian federal government employees not under a retirement system and workers in Puerto Rico and the Virgin Islands were included, as well as members of small occupational groups under a broader definition of employee.

Beginning in Sept. 1950, benefits for retired workers were increased by about 77·5% on the average; the minimum primary benefit was $20 but not less than $25 for those with average monthly wages of at least $35; the maximum family benefit was $150 (but not more than 80% of the average monthly wage). The insured status requirement was also made broader; a beneficiary might earn as much as $50 a month in covered employment without loss of benefits and after the age of 75 would receive benefits regardless of his earnings. Benefits were made payable for the first time to the dependent aged husband of a deceased or retired insured woman worker. The surviving children of a woman currently insured at her death might receive benefits whether or not the father also contributed to their support. Benefits were payable to the wife of a retired worker, regardless of her age, if she had his entitled child in her care. Benefits for dependent parents and for the first surviving child were raised to 75% of the primary amount.

Under unemployment insurance (administered in its federal aspects by the Department of Labour) about 7 million unemployed persons drew one or more benefit cheques during the fiscal year ended June 30, 1950. The average beneficiary drew benefits for about 13 weeks, and the average monthly payment made to an individual was $20·86. The state unemployment insurance systems paid out a total of $1,862 million, which represented partial compensation for wages lost during 91 million weeks of unemployment. Under the three state-federal public assistance programmes established by the Social Security act, 2 million needy persons received old-age assistance in June 1950. Nearly 1·7 million children in 650,000 families received aid to dependent children, and 77,000 persons received aid to the blind. About 526,000 cases (some 1·1 million persons) received general assistance, financed by states and localities without federal funds. The average monthly payments throughout the country were $44 to an aged recipient, $70 to a family receiving aid to dependent children, $48 to a blind recipient and $46 to a general assistance case.

The annual federal grants to states for maternal and child health services were increased by the 1950 amendments from $11 million to $15 million for the fiscal year 1950-51 and to $16·5 million thereafter. Federal grants for services for crippled children were raised from $7·5 million to $12 million annually for the fiscal year 1950-51 and to $15 million thereafter. Grants of $10 million ($3,500,000 before the amendments) were authorized for child welfare services for the protection and care of homeless and neglected children and children in danger of becoming delinquent.

Federal credit unions, co-operative associations organized to promote thrift among their members and to create a source of loans for provident and productive purposes, continued to be an active part of the Social Security programme. At the end of June 1950, 4,700 credit unions had been chartered; they were serving 2 million members and had assets of $363 million. (A. J A.)

SOCIETIES, LEARNED AND PROFESSIONAL. To further the development of international understanding the United Nations Educational, Scientific and Cultural organization began in 1949 to suggest topics for world-wide discussion. The topic chosen for 1950 was "Energy in the Service of Man" and this theme was prominent in two of the major events in the activities of the learned and professional societies. The fourth World Power conference assembled in London during July with its papers and discussions centred on "World Energy Resources and the Production of Power," and was attended by representatives of 45 countries who met under the chairmanship of Sir Harold Hartley (*q.v.*). The papers were concerned with diminishing world reserves of coal and oil and the means of supplementing them by the exploitation of undeveloped sources of energy. Although the annual meeting of the British association had no official theme there was considerable emphasis on various aspects of energy among the wealth of activity connected with the meeting. The presidential

address by Sir Harold Hartley was entitled " Man's Use of Energy " and this subject was vividly illustrated in an ambitious exhibition sponsored by the national corporations for coal, gas and electricity. The meetings were attended by over 3,700 people, including delegates from about 40 societies.

An event of considerable importance for the work of learned societies was the signing by Great Britain and 16 other nations of an international agreement sponsored by U.N.E.S.C.O. which was designed to allow educational and scientific material to cross frontiers without the payment of duty. The signatories agreed to lift customs duties on books, newspapers, educational films and recordings and works of art. A statement of great interest for a number of societies was made in the House of Commons by Herbert Morrison on Nov. 21: he announced that the government intended to establish, as soon as conditions allowed, a National Science centre in London. The centre would house certain societies now inadequately accommodated in Burlington house and elsewhere, together with the Patent Office library, the Department of Scientific and Industrial Research and other government scientific organizations.

The Information Services committee of the Royal Society produced two publications of particular interest for scientific societies. These were a list of British periodicals reporting original work and a pamphlet containing general notes on the preparation of scientific papers. Another action, designed to assist local societies especially those with antiquarian interests, was the setting-up by the Council for British Archaeology of a panel of lecturers. On Jan. 5, 1950, there was held the first general meeting of the Institute of Biology, formed after discussions among individuals and biological societies on the desirability of biologists creating an institute similar to those existing for physics and chemistry. At this first meeting E. Hindle and Professor J. F. Danielli, both of whom had been prominent in the preliminary negotiations, were elected president and secretary respectively. In the autumn the new institute was a sponsor, jointly with the Atomic Scientists' association, of a two-day conference on " The Biological Hazards of Atomic Energy."

The co-operation of three bodies in organizing the conference on biological hazards was an example of one of two trends to be discerned among the numerous and varied activities of the learned societies. During the year there were many joint activities of two or more societies such as: the Institution of Electrical Engineers' and the Institute of Physics' discussion on the teaching of electricity; the Scientific Film association's and the Royal Meteorological society's consideration of the use of films in meteorology, the joint meeting of the British Society for the History of Science, the Association of Women Science Teachers, the Science Masters' association, the National Institute of Adult Education and the Workers' Educational association to discuss " The History of Science in Education." A two-day conference on " Evolution and Education " held in December was sponsored by no less than 11 bodies with interests touching on education and social biology.

The other general movement was, paradoxically, towards further specialization; inside some societies there appeared active sub-sections or groups which discussed matters of interest to workers in restricted fields. Seven groups of the Institute of Physics dealing with electronics, education, electron microscopy, industrial radiology, industrial spectroscopy, stress analysis and X-ray analysis held frequent meetings.

In chemistry some 230 meetings were held by 20 societies in the last three months of the year. The Royal Astronomical society met outside the United Kingdom for the first time when it held its summer meeting in Dublin. Under the auspices of the Anatomical society and the presidency of W. E. Le Gros Clark, the fifth International congress met in Oxford with an attendance of 535 members from 36 countries. At the anniversary meeting of the Royal Society Professor E. D. Adrian, whose work had previously been recognized by the award of the Order of Merit and a Nobel prize for medicine, was further honoured by being elected to the presidency in succession to Sir Robert Robinson. At this meeting of the Royal Society was announced an appeal for £100,000 to found Commonwealth scholarships and endow lectures in memory of Lord Rutherford. The two Royal medals of the society were awarded to Sir Edward Appleton and C. F. A. Pantin.

Several societies arranged functions for the public. The Institute of Metallurgists in conjunction with the Science museum staged an exhibition on " Metals in the Service of Mankind " which remained open for three months. A series of monthly shows of films on scientific topics was presented by the Scientific Film association. The important subject of the world's food supplies and Britain's needs was presented by a number of experts including Julian Huxley, Lord Boyd-Orr and Sir George Stapledon at an open conference organized by the Association of Scientific Workers. A less direct contribution to the popularization of science was the formation by the chemical council of a panel of specialists who were willing, and competent, to write articles for the press on various aspects of chemistry.

The journals of the smaller local societies, firmly re-established after the war, appeared with increasing regularity. Four new national journals of note appeared during the year. the launching of a *British Journal for the Philosophy of Science* and the publication by the Operational Research club of a quarterly *Operational Research* were indicative of an increased interest in broader issues. A new *Journal of the Science of Food and Agriculture* appeared under the auspices of the Society of Chemical Industry as an adjunct to its existing *Journal.* The Institute of Physics commenced publication of a monthly *British Journal of Applied Physics.*

The year 1950 was an occasion for centennial celebrations by two bodies. The Royal Meteorological society arranged meetings, symposia and visits during the period March 28 to April 3 culminating to celebrate the 100th anniversary of its foundation. The annual conference of the Library association which took place in September commemorated the Public Libraries act of Aug. 1850. The attendance of 1,800 included over 120 persons from 40 overseas countries. In the absence of the Duke of Edinburgh on naval duties, Earl Mountbatten of Burma delivered the presidential address. The National Book league in collaboration with the Library association staged an exhibition, entitled " 40 Million Books," which reviewed the development of the services provided by public libraries.

In preparation for the Festival of Britain in 1951 many of the learned societies gave advance attention to special programmes. It was not inappropriate that the Royal Society of Arts, which played such a large part in the condeption and planning of the 1851 exhibition was the first Society to present its festival items including a special lecture programme which began in November and the announcement of a prize of £500 to be awarded in 1951 for a means of promoting the economic utilization of food in Britain.

(D. N .L.)

SOCIETY ISLANDS: *see* PACIFIC ISLANDS, FRENCH.

SOIL CONSERVATION. Increasing desiccation is a common feature in many tropical and semi-tropical countries and the question was often asked whether the replacement of forest by the extension of agriculture has any

direct effect upon the amount of rain which falls. It was generally agreed by meteorologists that the main monsoon currents are unlikely to be interfered with but that on the other hand inter-monsoon storms depending upon "instability rainfall" can be affected because forest cover provides for the more gradual discharge of the electric potential from cloud layers, whereas bare eroded or ravined land throws off upward currents of hot air which drive off moisture-laden clouds.

The main effect of forest cover however is not in influencing the amount of rain but in the manner of its disposal as it falls. Research in soil conservation in 1950 emphasized that the initial damage occurs when individual raindrops hit bare ground. A photograph of the splash showed that a heavy raindrop rebounding from powdery soil is no longer clear but is liquid mud; the same drop falling onto a leafy canopy will find its way to the ground without doing such damage. At the next stage the liquid mud seals the ground surface with a paste so that subsequent rain cannot penetrate into the soil but runs off from the surface, whereas ground covered with a mat of vegetation continues to be absorbtive even after much rain has fallen. Research by W. B. Ellison on the action of raindrops in the initial stage of soil erosion tended to shift U.S. emphasis from gullying and the later phases back to the basic need for protecting the soil from the destructive effect of falling rain. This point of view is of great significance in the tropics where rainfall of four inches an hour is fairly common.

So far as flood damage and landslips form a subsequent phase of raindrop erosion it is interesting to note how continued heavy rain can hasten disaster. An analysis of flood conditions in the highland catchment of the Mahaweliganga in Ceylon showed that crucial damage occurred whenever 50 in. of rain fell in from 6 to 10 days, with from 9 to 16 in. falling in the worst 24 hr. The chief causes of damage towards the end of such a period are the slumping of water-logged talus slopes, mud flows from previously burnt forest or grass land, local concentration of badly planned road drainage and the undercutting of hillsides by flooded streams causing bank erosion.

A type of soil erosion which had previously passed almost unnoticed is that in rice paddy cultivation. In most tropical countries there is a tendency to keep flowing water moving through the rice fields at all stages of the crop from the soil preparation or "muddling" to the ripening of the crop. In this way as much as 14 to 20 ac.-ft. are used for one crop of rice, and the run-off though not actually muddy has a curious steel-grey colour which indicates the presence in the waste water of much valuable colloidal clay. With careful water-use paddy can be grown from 3 to 4 ac.-ft., and in many seasons there is enough rain to do without irrigation altogether, or to have irrigation carefully controlled so that it stops as soon as rain comes. Data from irrigated rice crops in Texas showed that 3½ ac.-ft. of water yielded 97 bu. of rice whereas even an extra foot reduced the yield to 60 bu. In many eastern countries the waste of irrigation water was seen to be a major source of soil deterioration through the washing away of plant nutrients into the rivers.

Measurements of the load of eroded material carried by various rivers in Asia was summarized in the publication *Flood Control* by the Economic Commission for Asia and the Far East which was established in 1947 with its headquarters in Bangkok. The Yellow river of China frequently registered a silt content of 50% by weight. The Kosi of Bengal had registered 1,800 cu.m. of silt a square kilometre of catchment (the corresponding figure for the Yellow river being 1,630 cu.m./sq.km.). Reduced to an annual average the Yellow river's silt amounted to 4·4% by weight, but most of the other large rivers of the world gave less than 3 per 1,000. These figures do however emphasize the serious danger of a sudden flood bringing down so much debris that the existence of any reservoir along its course was threatened. The main recommendation of E.C.A.F.E. specialists was that a survey of the land uses and erosion conditions in the catchment area should be made an essential preliminary in any major scheme or project which would involve the ponding of water behind a dam.

The world shortage of food grains had the effect of forcing the pace of opening up land hitherto under forest or undeveloped. In India the Demodar dam in Bihar and the Bhakra dam on the Sutlej river both made some progress but were held up by the shortage of technicians, labour troubles and difficulty in getting engineering equipment. The floods caused by an earthquake in Upper Assam in Aug. 1950 ruined many tea estates as the water subsided very slowly, and Dibrugah and many other towns along the Brahmaputra were swept away by considerable changes in the courses of its tributary streams. The colonization of the Mianwali district of Pakistan went ahead with the completion of the Daud Khel barrage on the Indus, but wind erosion of the sand dunes would have to be checked before the fruits of new irrigation could be reaped.

In Israel the Jordan Valley authority did not progress appreciably beyond the planning stage; but was a fine example of what could be done on the model of the Tennessee Valley authority to bring the modern pattern of integrated land usage to a backward countryside, in a project for food production with effective soil conservation, chemical engineering for the working of natural deposits and the use of river water for hydro-electric generation. Ceylon's chief contribution of this sort was the Gal-Oya dam in the Eastern Province. The dam, constructed by a U.S. engineering firm, was approaching completion; its waters would be used for hydro-electric generation and the irrigation of some 120,000 ac. for rice and sugar growing. The northern dry zone of Ceylon still had traces of many ancient water tanks engulfed in scrub forest but extensive clearance was being made in order to re-establish these tanks for minor irrigation schemes. To a lesser extent the forest was being opened up for dry farming; the technique for this had not yet been fully worked out but was based on the use of a grass ley for four years to rebuild the soil after four years of cereal crops such as maize and millet.

The above are all examples of direct government sponsoring of land development. In Australia the banks were the prime movers in such work; the Australian Mutual Provident society for instance took up 300,000 ac. of land near the desert town of Keith to establish livestock pasture. In this area previously defective pasture was made more productive by the application of minute doses of cobalt.

The United Nations Food and Agriculture organization and E.C.A.F.E. sponsored several international conferences on soil erosion and allied subjects. A meeting of European land and water utilization experts, sponsored by the F.A.O., was held in Amsterdam in July. Austria, Belgium, Denmark, Finland, France, Ireland, Italy, the Netherlands, Norway, Sweden and the United Kingdom sent delegates; observers came from Spain, Western Germany and the U.S. The conference emphasized the need for mutual assistance among European countries, recommended that a permanent soil conservation working commission for Europe be set up. The Conference for the Conservation of Natural Resources met at Lake Success, New York, in Aug. 1949 and its published papers were of the greatest value to technicians working in many lonely parts throughout the world. The World Forestry conference met in Finland and a regional meeting of foresters of southeast Asia was called by E.C.A.F.E. in Bangkok. An international training scheme for soil

conservation technicians was launched in April, 1950, by the F.A.O. and the Cyprus government. The participating countries—Cyrenaica, Persia, Jordan, Lebanon, Saudi Arabia, Syria, Turkey, Israel, France, Greece, Italy and Yugoslavia—sent technicians to Cyprus to spend a year or more working under the supervision of the island's conservation officials. The Inter-African Information Bureau on the Conservation and Utilization of the Soil was formed early in the year by Belgium, France, Portugal, Great Britain and the Union of South Africa.

The main trend of opinion among land-use planners emphasized that fire should not be used as a method of clearing land. Primitive systems of jungle fallow almost always entail the burning of whatever jungle growth had come up in the fallow period of, say, five to ten years after that particular plot was last cropped. Fire cleared the ground for the cultivator but it also destroyed the accumulated forest soil and dissipated it completely. Where fire was used in this primitive fashion to clear large blocks of forest for land development, particularly with the aid of bulldozers to heap it for burning, the destruction of accumulated fertility was complete. Many specialists were now convinced that the only way to preserve the forest fertility and make it available for agricultural cropping was to do away with burning.

The chief stumbling block to progress was not so much the technical difficulty of stopping wind and water erosion as the social implication of interfering with the lives of primitive people and farming communities whose practices were dictated by ancestral custom and limited by the fragmentation of land holdings. The methods of landholding and tenancy were also a serious factor because land was usually held on a period of one crop without any security of tenure and if a tenant made any improvement in the holding he was likely either to have his rental raised or to be asked to move out because someone else was prepared to pay a higher rent for the improvement he had made. Tenancy laws would have to be altered to give some encouragement to improvers by offering them security of tenure and security against enhancement of rent for improvements made, if sound soil conservation was to become common practice. This applied to practically all Asiatic countries, particularly where British or Dutch law had been grafted on a primitive feudal system. (R. M. GE.)

United States. At the end of the fiscal year 1950, detailed conservation surveys had been completed on 344,770,000 ac. of farm and ranch land in the United States. Complete conservation farm plans had been prepared for 873,181 farms comprising 240 million ac. of land. Nearly 218 million ac. of the farmland planned was being cultivated according to the conservation plans. During the fiscal year about 200,000 farmers and ranchers had made application to the Soil Conservation service for assistance in preparing plans for their land.

Considerable progress was made in the land capability survey work, a function of the Soil Conservation service. The survey showed that more than 31% of the land of the U.S. was suitable for continual cultivation, 8·5% required good grass cover most of the time with only an occasional ploughing for crop production and about 55·5% was only suitable for grass and trees. Five per cent consisted of marshes, beaches, rock outcrop and other land suitable only for wild life or for recreational purposes.

A carefully standardized wind tunnel of laboratory type was used for measuring the susceptibility to wind erosion of the soils of the southern Great Plains when prepared by various conservation practices. The studies confirmed the great importance of roughness in seed-bed preparation in the plains, especially the protection given by clod structures against erosive winds. Stubble mulch farming, an important wind-erosion control practice, was practised on more than 35 million ac. of cropland in the U.S. by the end of the year.

Latin America. In Mexico, complete conservation plans were made for 1,000 ac. of irrigated farms in Durango and the plans were given to farmers for use in planting, cultivation and irrigation to prevent erosion, alkalization and the waste of water. In un-irrigated areas, bench terraces, rock dams, contouring and strip cropping, hillside tree planting and range management were widely used.

In Costa Rica a soil conservation project was organized in the Palmares valley where erosion was serious because of continual tobacco cultivation. Nearly 1,000 ac. were terraced. Green manure cropping, contour strip cropping and rotations including pasture crops were introduced on many farms.

Tree planting in the Argentine pampas was launched by government order as a part of the programme to halt soil erosion. At the same time, intensive ecological studies were in progress to determine native and exotic plants suitable for stabilization of moving sand dunes in the province of Buenos Aires. (*See* also FLOODS AND FLOOD CONTROL.)

(H. H. BE.)

SOLOMON ISLANDS: *see* TRUST TERRITORIES.

SOLOMON ISLANDS PROTECTORATE: *see* PACIFIC ISLANDS, BRITISH.

SOMALILAND, BRITISH. British protectorate in east Africa bounded N. by the Gulf of Aden and French Somaliland, W. and S. by Ethiopia and E. by Italian Somaliland. Area: about 68,000 sq.mi. Pop.: (no census ever taken, 1937 est.) 344,700, (1949 est.) 500,000 Somali nomads of ancient African Hamitic stock but with considerable infusion of Arab blood. Their language adopted many Arabic words and their writing is a variant of the Arabic script. Religion: Moslem. Capital, Berbera. Administration: governor; no executive or Legislative Council. Governor, Gerald Reece.

History. Colonial development grants amounting to some £750,000 had been given and considerable progress had already been achieved, particularly in establishing an educational system, though, in addition to its other difficulties, the administration was faced, during the second half of 1950, with both locusts and a famine. Serious locust and grasshopper infestation (*see* EAST AFRICA HIGH COMMISSION) necessitated a vigorous campaign of destruction which met with some objection from bewildered tribesmen.

Finance and Trade. Currency: Indian rupee and East African shilling (20*s.* = £1 sterling). Budget (est. 1949-50): revenue (incl. grant-in-aid, £832,134) £1,228,000, expenditure £1,228,000. Foreign trade (1949): imports £849,932, exports, incl. re-exports, £583,089. Principal exports: hides and skins, livestock, gums, ghee. (K. G. B.)

SOMALILAND, FRENCH. Former colony situated in the Gulf of Aden the status of which was changed in 1946 to that of overseas territory, bounded N. by Eritrea, N.W. and S.W. by Ethiopia and S.E. by British Somaliland. Area: 8,376 sq.mi. Pop.: (1936 census) 46,391; (1948 est.) 56,000. Among the Natives there were 21,000 Danakils, 15,700 Somalis and 5,600 Arabs. There were also about 2,034 Europeans, including 1,260 French. Capital, Jibuti (pop., 1949 est., 22,000). Governor, Numa Sadoul.

History. By an act of Aug. 19, 1950, was created a Representative Assembly of 25 members divided into two sections deliberating together, the metropolitan section consisting of 12 members and the Native section of 13 members elected by constituencies based on ethnic considerations (4 Issas, 4 Danakils, 2 Issaks, 2 Arabs and 1 Gadabourcy). On Nov. 5 election of the metropolitan section took place: only candidates of the Rassemblement du Peuple Français (General Charles de Gaulle's party) were elected.

Foreign Trade. (1949, million Jibuti francs) imports 1,940·2; exports 1,490·2. Main exports (metric tons): salt 112,015; Ethiopian coffee 5,341; Ethiopian cereals 4,409; Ethiopian hides 1,670.

Transport and Communications. Railway (a section of the Jibuti-Addis Ababa line): 98 km. Roads (1948): 25 km. Motor vehicles licensed (1948): cars 169, commercial 210. Ships entered at Jibuti (1949) 1,550; cargo (metric tons): unloaded 277,900; loaded 133,000.

Finance. Budget (1949 est.): Jibuti Fr. 403·3 million. Monetary unit: Jibuti franc with an exchange rate of J.Fr. 100=M.Fr. 168. (C. A. J.)

SOMALILAND, ITALIAN Former Italian colony in east Africa, under British military administration from 1941, consigned to Italian trusteeship on April 1, 1950; bounded S.E. by the Indian ocean, N.W. by British Somaliland and Ethiopia and W. by Kenya. Area (British official est.): 216,310 sq.mi. Pop.: (1931 census) 1,021,572; (1949 est.) 971,879, almost exclusively Somali, with 2,985 Italians. Capital, Mogadishu (pop., 1949 est., 74,000, including the majority of Italians in the territory). Administrator, Giovanni Fornari.

History. On Nov. 21, 1949, by a resolution of the general assembly of the United Nations, the Italian Somaliland was placed under the trusteeship system, with Italy as the administering authority, with the provision that it should become an independent sovereign state in ten years. Pending ratification of the trusteeship agreement the administration, which had been British since the territory was occupied by Allied forces in 1941, was taken over by Italy on April 1, 1950, and British responsibility for the territory then ended.

The transfer of powers took place without incident and a temporary administrative boundary between Somaliland and Ethiopia, the frontier of which remained undefined, was agreed upon by the parties concerned. Despite the dire threats of widespread resistance to the Italians made by Somali political spokesmen, the country remained comparatively peaceful during the handover and the Italians generally were well received. As part of the trusteeship machinery an advisory council was established in Mogadishu, consisting of representatives of Colombia, Egypt and the Philippines, to advise the administering power. It functioned, intermittently because of absenteeism amongst the members, from May onwards.

Some preliminary steps were taken to give effect to the concept of a self-governing state but the trusteeship principle was still in the embryonic stage. The advisory council reported favourably to the United Nations in Nov. 1950 on the work of the Italian administration and noted an improvement in public security. During the fifth session of the general assembly of the U.N. the trusteeship agreement for the territory was approved despite an objection by the Ethiopian government that it was invalid because as an interested power they had not concurred in it. During the debates representatives of the Somali Youth league, which had bitterly opposed the return of Italy, complained of oppression and victimization and of intense Italian immigration, but the report of the advisory council suggested that the complaints were exaggerated. Ethiopian opposition to Italy softened considerably after the satisfactory solution approved for Eritrea (*q.v.*) and discussions between these two countries over the thorny problem of the disputed boundary, which formed the pretext for the Italian conquest of Ethiopia in 1936, began. The progress of Somaliland to the distant goal of independence therefore got off to a fair start. (*See* also TRUST TERRITORIES.) (F. E. S.)

Economy. Budget (1948-49, actual): revenue £1,114,747; expenditure £1,405,832. Foreign trade (£'000, 1948; 1949 in brackets): import £1,113·4 (1,378·5); export £180·5 (878·9). Roads (1947): 5,300 mi.

SOMOZA, ANASTASIO, Nicaraguan statesman (b. San Marcos, Nicaragua, Feb. 1, 1896), was educated at the Instituto Nacional de Oriente, Granada, Nicaragua, and at the Pierce Commercial school in Philadelphia, U.S. He was collector of internal revenue of the department of León in 1925, and after his party came into power in 1928 rose rapidly in national affairs, becoming successively governor of León, minister of war, minister plenipotentiary to Costa Rica, assistant secretary of foreign affairs and minister of foreign affairs. He was president of the republic from 1937 to 1947. He held the post of war minister when he announced, on Feb. 12, 1950, that he would run for president in that year to succeed Victor Román y Reyes. He was elected to a six-year term on May 21, 1950.



The balcony of the administration building in Mogadishu, Italian Somaliland, on April 1, 1950, when Italy took over administration of her former colony from Great Britain.

SOUTH AFRICA, THE UNION OF. A self-governing dominion of the Commonwealth of Nations. The four provinces of which it consists extend from the southernmost point of the African continent to the Limpopo river in the north. The total area of the Union is 472,550 sq.mi. and the total population was reckoned in 1946 at 11,418,349, divided between the provinces as shown below. South-West Africa (area, 317,725 sq.mi.; pop., 1946 est., European 38,020, Bantu and mixed 269,569), a former German colony, had been administered by the Union of South Africa since 1922 under League of Nations mandate and governed as an integral part of the Union (*see* also TRUST TERRITORIES.)

	Area (in sq.mi.)	Population (1946)
Cape of Good Hope	277,169*	4,053,848
Natal	35,284	2,202,392
Orange Free State	49,647	879,071
Transvaal	110,450	4,283,038

* Includes Walvis Bay (430 sq.mi.; pop. [1936] 2,035), which is an integral part of the Cape province but has been administered since 1922 by South-West Africa.

The following table gives the returns of population at the censuses of 1936 and 1946 and the official estimates for mid-1950, classified according to race:

	1936 census	1946 census	1950 est.
European	2,003,857	2,372,690	2,620,000
Bantu	6,596,689	7,831,915	8,347,000
Mixed	769,661	928,484	1,030,800
Asiatic	219,691	285,260	323,000
Total	9,589,898	11,418,349	12,320,000

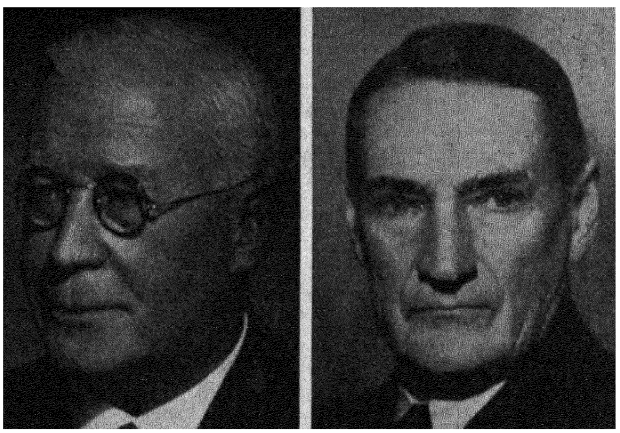
Official languages (European pop., 1946): Afrikaans (derived from Dutch) 55·9%, English 39·9%. Africans are Bantu-speaking classified into four main groups: Nguni (incl. Xhosa and Zulu) in the Cape and Natal; Sotho in the Transvaal and Orange Free State; and the smaller Tsonga and Venda groups in northern Transvaal. Of the coloured, over 90% are in the Cape Province and all speak Afrikaans or English. Of the Asians (Indians), over 80% live in Natal. Religion: (European pop., 1946) Christian 95·5% (Dutch Reformed Church 55%, Anglican 19%, Methodist 6%, Presbyterian 5%, Roman Catholic 5%), Jewish 4%; (non-European pop.) Christian 51%, no religion 44%, the remainder Hindu, Moslem and Buddhist. Chief towns (pop., 1946 census): Capetown (seat of legislature, 470,911, incl. 220,398 Europeans); Pretoria (seat of government, 244,887, incl. 130,810 Europeans); Johannesburg (765,457, incl. 332,026 Europeans); Durban (372,269, incl. 130,143 Europeans); Port Elizabeth (147,907, incl. 65,271 Europeans). Governors general: (1950) Major Gideon Brand van Zyl, (from Jan. 1, 1951) Ernest George Jansen (*q.v.*); prime minister and minister of external affairs, Daniel François Malan (*q.v.*).

History. The most important event in 1950 was the death of General J. C. Smuts (*see* OBITUARIES) which occurred on Sept. 11 at his home at Irene, near Pretoria. General Smuts' last appearance in public was at the enthusiastic celebration of his 80th birthday in Johannesburg in May. The whole country was deeply moved by the passing of the man who was by common consent regarded as the greatest figure South Africa had produced. Jacobus Gideon Nel Strauss was unanimously elected leader of the United party and of the parliamentary opposition in succession to General Smuts. A member of the bar in Johannesburg, Strauss was a former private secretary to Smuts. He was minister of agriculture in Smuts' last cabinet and had been a member of the House of Assembly since 1932.

The first elections held on Aug. 30 in the mandated territory of South-West Africa under the act passed in 1949 resulted in a sweeping victory for Malan's Nationalist party, which won all the six new seats in the Union House of Assembly as well as 15 of the 18 seats in the local legislature. The government's slender majority in parliament was strengthened accordingly, there being a total of 86 members of the Assembly supporting the government and 73 forming the opposition (including all parties).

The constitution was amended to permit the executive council to be enlarged from 12 to 14 members, and in October the cabinet was accordingly reconstructed. The Afrikaner party gained a second representative in J. H. Viljoen who became minister of mines and minister of education, arts and science. Senator H. F. Verwoerd was appointed minister of native affairs and J. F. T. Naude minister of posts and telegraphs. Ernest George Jansen resigned the portfolio of native affairs following the announcement that he would take office on Jan. 1, 1951, as governor general. A former speaker of the House of Assembly, he would be the first Nationalist to hold the office of governor general. The new speaker of the House was J. H. Conradie, also a Nationalist.

On Oct. 14 Malan, the prime minister, as leader of the Nationalist party, and N. C. Havenga, as leader of the



Major Gideon Brand van Zyl (left) governor general of South Africa, 1946-50, and Ernest George Jansen, who succeeded him on Jan. 1, 1951.

Afrikaner party, announced that they had composed their differences on the subject of the removal of the Cape coloured voters from the common electoral roll. In terms of this agreement, the constitution would be amended in 1951 to abolish the existing coloured franchise rights. Instead the coloured voters would elect four white persons to represent them in the House of Assembly and two in the Cape provincial council, and there would be one senator to represent them in the upper house. The two government party leaders contended that it was not constitutionally necessary that this change should be approved by a two-thirds majority of all members of parliament. The opposition, however, contested this view, and the question remained one of keen political controversy.

Legislation. The parliamentary session lasted from January till June. There were four highly controversial measures. The Group Areas act provided for the population to be divided into three major groups, white, native and coloured, and for the native and coloured groups to be sub-divided on ethnic, linguistic or cultural lines. The government was empowered to proclaim areas for occupation by members of the three racial groups. A person who was not a member of a group was prohibited from owning or occupying property or trading in the group area unless he had been granted an official permit issued at the discretion of the minister of the interior. It was announced that the act would also be applied to the small Chinese section of the population.

The Population Registration act provided for the compilation of a register of the whole population and for the issue of identity cards to persons whose names were included in the register. Every registered person was to be classified as a white person or a native or a coloured person and natives and coloured people were to be further classified according to the ethnic or other group to which they belonged.

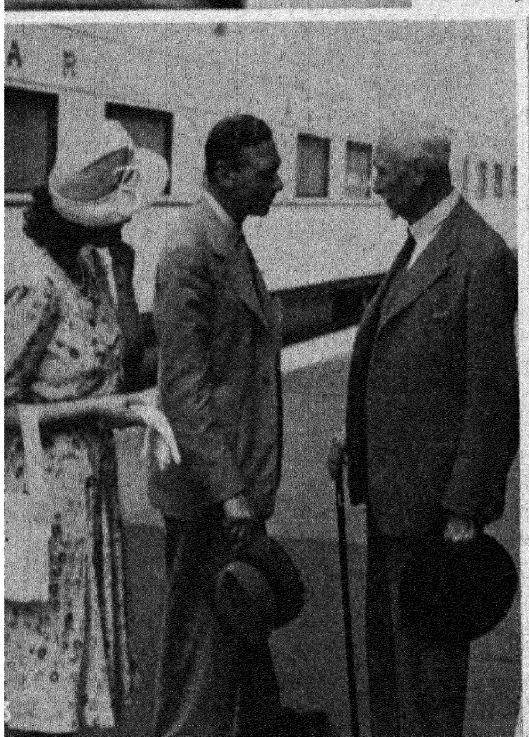
A third measure was also designed to implement the government's avowed policy of *apartheid* or segregation of the races. It was the Immorality act, which declared sexual intercourse between white and coloured persons to be a serious crime, thereby extending the law of 1927 which had made such relations between Europeans and Africans an offence. The new law was promptly enforced by the police.

Considerable criticism not only by the parliamentary opposition but by the legal profession and other bodies was directed against the passage of the Suppression of Communism act. The act conferred on the minister of justice far-reaching powers. He might declare any organization unlawful and name any person a Communist where in his opinion the person or organization had promoted the spread of Communism. Communism was defined in very wide terms to include the doctrines of Lenin, Trotsky, the Comintern





JAN CHRISTIAAN SMUTS (1870-1950).
In London (1) during World War I, and with Stanley Baldwin at the 1923 Imperial conference (2) At Ladysmith in 1947, with the King and Princess Elizabeth, during the royal visit to South Afric (3), and at Cambridge in June 1948 (4) when he was installed as chancellor of Cambridg university. Large crowds (5) watched the funeral procession in Pretoria, Sept. 15, 195







and the Cominform and also the encouragement of feelings of hostility between the European and non-European races of the Union. A person named by the minister might be prohibited from taking part in public life and from holding any office. If such a person were a member of parliament, the minister could direct him to resign. Severe penalties of imprisonment might be applied to persons who failed to comply with official orders or who hindered investigations made under the act. The act also declared the Communist party of South Africa to be an unlawful organization, but the party dissolved itself shortly before the act was passed. About 300 people were named under the new law. Although the act virtually excluded appeal to the courts, the government's appointment of a liquidator to wind up unlawful bodies and to compile a list of persons named was challenged at law.

Economic Position. The budget was presented in February by N. C. Havenga, minister of finance. The revised estimates of revenue for 1949-50 showed a total of £145,750,000, slightly more than was anticipated thanks mainly to a large yield from income tax. The deficit originally budgeted for in respect of this year did not occur. For the year 1950-51 the estimates of total expenditure rose to nearly £149 million. As a consequence of the devaluation of sterling, however, revenue from taxation of the gold mines was expected to increase by £7,800,000. But revenue from customs would fall by about £5 million because of restrictions on imports. To meet the deficit postal, telephone, and telegraph charges were increased. An additional duty of 3*d.* a gallon on petrol was imposed, the proceeds going to the road fund. During 1949-50 total expenditure from loan funds rose to the record figure of £82 million; for 1950-51 this figure was to be heavily reduced, to an estimated £56 million.

South Africa's exchange resources were strengthened and the country's position in relation to hard currencies improved substantially. The governor of the reserve bank reported on July 26, 1950, that the gold reserve which stood at £31,494,000 on Dec. 31, 1949, before revaluation and at £45,410,000 thereafter had risen by March 31, 1950, to £58,768,000. The National Finance corporation, established in 1949 to attract funds lying idle within the Union, received in deposits the unexpectedly large total of £163 million in the first year of its operations. This suggested that satisfactory progress had been made towards establishing a short-term money market within the Union.

Race Relations. There was further deterioration in the relations between the white and non-white races. On May 1, and to a lesser extent on June 26, abstention from normal work was organized by non-Europeans on a considerable scale as a protest against current legislation. The authorities took steps to quell disorders arising from this situation. Towards the end of 1949 and early in 1950 there were disturbances with loss of life on the Witwatersrand. A commission was appointed to investigate the series of riots. Its report (U.G. 47 of 1950 published by the Government Printer, Pretoria) referred to the strong feeling of antagonism on the part of non-Europeans against government and control of Europeans and to the problems encountered by the police in enforcing the pass laws and the liquor laws in urban areas. It pointed out that " industrial development on the Witwatersrand has brought in its train chaotic housing conditions, unemployment, unstable family life and the breaking of social bonds among Africans."

International Relations. The general assembly of the United Nations asked the International Court of Justice (*q.v.*) for an advisory opinion on the status of the mandated territory of South-West Africa and on the international obligations of the Union arising therefrom. By a vote of 8 to 6, the court held that the United Nations Charter did not impose on South Africa a legal obligation to put the territory under trusteeship. By 12 votes to 2, however, the court held that South Africa continued to have certain obligations, including the transmission of petitions to the United Nations from the inhabitants of the territory. The court further held unanimously that South Africa acting alone could not modify the international status of the territory without the consent of the United Nations. The prime minister promptly declared that the implications of this decision were not acceptable to the Union government.

After preliminary talks, the round-table conference between India, Pakistan, and South Africa, proposed by the general assembly of the United Nations, was not held. The government of India declined to participate on the ground that new legislation had aggravated the treatment of Indians in the Union. This subject, as well as the status of South-West Africa, was debated by the United Nations.

The Union's racial policies continued to be the object of much criticism in the world's press, especially in Britain and the United States. Concerned about such criticism abroad and dissatisfied with the English-language daily newspapers at home, the government appointed a commission to inquire into the control of the press and especially the accuracy of foreign correspondents in the Union. (J. LN.)

Education. State schools (1947): primary 1,190 (European 1,110), pupils 115,368 (European 92,291), teachers 3,927; secondary and high schools 241, pupils 75,339 (European 65,232), teachers 3,122; mission schools 3,036, pupils 386,054, teachers 9,421; other schools 99, pupils 3,031; training institutions 32 (European 9), pupils 3,790 (European 874), teachers 218. Private schools (1947): kindergarten 92; primary 773; secondary 114; commercial and business 19; other 10; pupils at all private schools 73,787 (European 36,500). Technical colleges (1946) 11, students 43,110, teachers 2,063. Universities (1946) 4 and constituent colleges of the University of South Africa 5, students 19,994, professors and lecturers 1,743.

Agriculture and Fisheries. Main crops ('000 metric tons, 1948; 1949 in brackets): maize 1,833 (2,363); wheat 473 (372); barley 31; oats 98 (116); potatoes 206 (285); rice, milled equivalent 17 (15); sugar, raw value 552 (508); groundnuts 62 (85); sunflower seed 25 (31); grapes, total 450 (430); raisins 9·5; citrus fruit 194; tobacco 20·6 (20·9). Wine production (1948) 2,700,000 hectolitres. Livestock ('000 head): cattle (Aug. 1949) 12,242; sheep (Aug. 1948) 32,612; pigs (Aug. 1946) 1,118; horses (1946) 687. Meat production ('000 metric tons, 1948; 1949 in brackets): 436 (435) of which beef and veal 308 (309). Dairy production ('000 metric tons, 1949; 1950, six months, in brackets): butter, factory production 21·1 (14·3); cheese, factory production 7·8 (4·2). Wool production, greasy basis (1949): 97,000 metric tons.

Industry. Industrial establishments (1946-47): 11,886; persons employed 558,725 (Europeans 194,937). Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 25,008 (12,634); electricity (million kwh.) 9,924 (5,275). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): iron ore, metal content 1,248 (556); pig iron 708 (343); steel ingots and castings 636 (408); copper 29·6 (16·3); gold ('000 fine ounces) 11,708 (5,834); diamonds ('000 metric carats) 1,265. Cement production ('000 metric tons, 1949 1950, six months, in brackets) 1,363·2 (867·6).

Foreign Trade. (Million £SA, 1949; 1950, six months, in brackets (excluding gold bullion) imports 314 (128·1); exports 152·6 (92·9). Main sources of imports (1949): U.K. 40·9%; U.S. 27·7%; Canada 5·6%; Iran 2·6%. Main destinations of exports (1949): U.K. 28·3%; Southern Rhodesia 9·8%; France 9·8%; U.S. 8·3%. Main imports (1949): cotton piece-goods 4·7%; motor spirit 3·2%; rayon piece-goods 3·1%; motor car chassis 2·7%; agricultural machinery and implements 2·6%. Main domestic exports (1949): wool, greasy basis, 21·4%; diamonds, rough and uncut, 3·9%; asbestos 2·6%; copper 2·6%; citrus fruits 2·5%.

Transport and Communications. Licensed motor vehicles (Dec. 1949): cars 406,000; commercial 113,000. Railways (1949): 13,931 mi.; freight net ton-mi. 11,021 million; freight carried ('000 metric tons) 44,868. Shipping (July 1949): number of merchant vessels over 100 gross tonnage 157; total tonnage 177,268. Air transport (1949): passenger-mi. 104 million; cargo net ton-mi. ('000) 3,378. Telephones (1947-48): subscribers 206,493. Wireless receiving sets (1949) 497,428.

Finance and Banking. (Million £SA) budget: (1949-50 est.) revenue 145·7 expenditure 147; (1950-51 est.) revenue 149, expenditure 149. National debt (Aug. 1949; Aug. 1950 in brackets): 696 (747). Currency circulation (Aug. 1949; Aug. 1950 in brackets): 65·2 (68·4). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 190 (416). Bank deposits (million £SA, Aug. 1949; Aug. 1950

in brackets): 287·9 (307·6). Monetary unit: South African *pound* at par with the pound sterling and with an exchange rate (Nov. 1950) of £SA 0·357 to the U.S. dollar.

See André Siegfried, *African Journey* (London, 1950).

SOUTH AFRICAN LITERATURE. English. The yield of 1950 was in some degree determined by commercial conditions, which apparently discouraged the publication of works of fiction, poetry and *belles lettres*. No indisputably first-rate work in any of these classes appeared. *Wild Conquest* by Peter Abrahams (New York), a tale of the Great Trek and the clash of black and white, and *The Slaves of the Lamp* by Mary Morison Webster (Johannesburg) were noteworthy.

Historical works included *The Rise of the Basutos* by G. Tylden (Capetown) and a further volume on the Portuguese period by Sidney R. Welch, *Portuguese Rule and Spanish Crown in South Africa 1581-1640* (Capetown). *Those in Bondage* by Victor de Kock (Capetown) was a popular but well-documented account of slavery at the Cape. Popular works of historical interest were fairly numerous: *Birds of Passage* by Madeleine Masson (Capetown) gave sketches of early visitors to the Cape; *At Daybreak for the Isles* by Lawrence G. Green (Capetown) dealt romantically with South Africa's neighbouring islands; *Shovel and Sieve* by Eric Rosenthal (Capetown) comprised the author's lively recollections of old Rand pioneers; *Red Buffalo* by H. W. D. Longden (Capetown) was the life of a companion adventurer of Cecil Rhodes. There were also the *Reminiscences and Family Records* of the centenarian Arnold Wilhelm Spilhaus, edited by M. Whiting Spilhaus (Capetown). A notable book of social philosophy was *The Survival of Political Man* by Errol E. Harris (Johannesburg). The literature of painting was represented by the beautifully illustrated *Wenning* of Gregoire Boonzaier and I. Lippy Lipshitz (Capetown) and by the *Tretchikoff* of Richard Buncher (Capetown). (L. HMN.)

Afrikaans. During 1950 the wandering minstrel Uys Krige enriched Afrikaans poetry by a volume *Vir die Luit en Kitaar*, renderings of European and American poems. A marked trend in the direction of the narrative poem was evident, largely in journals. C. M. van den Heever collected his best efforts of the past decade in *Verhalende Verse*.

Three novelettes merit special mention: *Marthinus se Roem*, a satire by C. M. van den Heever; *Groen Oewers*, a tale with a romantic touch, by Willem van der Berg; and *Die Dans van die Dwarrelwinde*, a tale of sin and sorrow, by Abel Coetzee. *Gewondes*, by E. C. M. du Toit, short stories depicting the spiritual ennui of modern cosmopolitan centres, should also be mentioned.

An outstanding novel was *Shangani*, a tale of native life by Oswald Pirow, a former minister of defence.

A biography, *Applous!* by the veteran trouper André Huguenet, related the early privations of Afrikaans touring dramatic companies, up to the end of the first stage of development: the founding of the National theatre, 1949. Of general interest, too were the biography of A. G. Visser, *Sanger van die Suikerbosrand*, by P. H. Langenhoven; an anthology from the poetry of Totius, with an introduction by C. M. van den Heever, *Keur uit die Gedigte van Totius;* an account of early South African history by A. N. Pelser, *Wordingsjare;* and a study on the sources of the Afrikaans fairytale by S. C. Hattingh, *Sprokiesvorsing*.

At the end of the year, when the 15th and last volume of the annual (*Jaarboek*) of the Afrikaans P.E.N. was issued, it was announced that this vigorous publication would be superseded by a P.E.N. literary quarterly, *Tydskrif vir Letterkunde* towards the end of March 1951 (A. J. COE.)

SOUTHERN RHODESIA. Self-governing African colony in the Commonwealth of Nations, subject to the power, retained by the Crown, to disallow bills affecting the African population, the unalienated lands, the railways and the mineral rights of the British South Africa company. Area 150,333 sq.mi. Pop. (June 1950 est.): 2,084,800, incl. 129,000 Europeans, 1,959,000 Africans, 3,600 Asians, 5,200 mixed. Chief towns (pop. 1950 est., Europeans only): Salisbury (cap., 38,000), Bulawayo (33,000), Umtali (5,000), Gwelo (5,000). Languages: English, Afrikaans (derived from Dutch) and native tribal dialects. Religion: Africans mainly pagan with substantial Christian minority. Administration: governor; executive council (cabinet); Legislative Assembly in which seats were held as follows on Dec. 31, 1950: United party 24, Liberal party 1, Rhodesia Labour party 1. Governor: Major General Sir John Noble Kennedy; prime minister, Sir Godfrey Huggins.

History. On the recommendation of a select committee membership of the Rhodesian parliament was to be increased from 30 to 40 and before the next general election, which had to be held not later than 1953, a senate of 15 members was to be created. One by-election was held during the year at which the United party (in office) retained the seat with a greatly reduced majority because of heavy voting for the Rhodesia Labour party candidate. A delegation headed by the prime minister visited Lisbon to seek agreement on the rapid improvement of the port facilities at Beira, Portuguese East Africa, where for sometime there had been great congestion. This meeting proved abortive but later in the year an Anglo-Portuguese convention was signed. In this Portugal agreed to provide adequate facilities at Beira, and the British territories for which the port is the natural outlet gave assurances about future traffic and the use of the port. The delegation also visited the United Kingdom to discuss with the government capital investment in Southern Rhodesia.

The United Kingdom government decided on a fresh examination of the problem of the closer association of Southern Rhodesia, Northern Rhodesia and Nyasaland, and for this purpose a conference composed of officials of the three central African governments, the Colonial Office and the Commonwealth Relations Office was to be held in London early in 1951. The Southern Rhodesian government gave notice in Jan. 1950 that it would not continue membership of the Central African council (*q.v.*) after the end of the year and a committee was set up to study inter-territorial co-operation in central Africa. It recommended formation of a Rhodesia-Nyasaland secretariat and a Rhodesia-Nyasaland inter-territorial conference. These recommendations were accepted by all three governments.

The colony was represented at the Central and Southern African Transport conference held in Johannesburg in November, where proposals for a permanent co-ordinating organization and for the completion of a direct railway link between the railway systems of the colony and those of South Africa failed to find agreement. In September Southern Rhodesia celebrated its diamond jubilee. One of the few survivors of the 1890 pioneer column hoisted the flag in Salisbury. The first high commissioner for the United Kingdom in Southern Rhodesia was appointed. Mrs. Tawse Jollie, a Rhodesian M.P., the first woman to be elected to a Commonwealth Parliament outside Britain, died during the year. The deputy chief of the Economic Co-operation administration in the United Kingdom visited the colony to investigate the assistance needed in the production of materials for strategic stockpiles and the technical assistance needed for general economic development.

Measures were passed to render dog racing and sports pools illegal, and a Subversive Activities bill was approved. The budget contained no rise in direct taxation but there were increases on tobacco, cigarettes, surface mail rates for foreign countries outside Africa, telephone calls and installations

and boarding school fees. The gold industry contribution was withdrawn. A survey of the catchment area of the Sabi and Lundi rivers was completed and recommendations made for a development scheme costing £20 million over 25 years. The pilot schemes were estimated to cost £2,300,000. An experimental station for the scheme was approved. An agronomic survey was appointed for the territory. The task was expected to take four or five years. A reconnaissance party examined a project for a pipeline for petrol and oil from Beira to Umtali. Proposals included tank storage in the colony. Petrol consumption had risen from 650,000 gal. a year in 1946 to 3,300,000 gal. in 1949.

The housing problem continued to cause grave concern. Though, on this account, efforts were made to restrict immigration to 8,000 a year, 14,096 European immigrants entered the colony in 1949 and a further 7,872 in the first half of 1950. The value of building work done in 1949 was £6,112,000. An agreement was reached in London between tobacco representatives of Southern Rhodesia and of British manufacturers for the sale of 405 million lb., two-thirds of the crops for 1951-55. Four hundred and fifty companies were registered with a combined authorized capital of £9,136,005 during 1949; in the first seven months of 1950, 274 companies with an authorized capital of £12,908,924 were registered, including the African Finance company (£5 million) and Rhodesian Alloys Ltd. (£1 million). A Southern Rhodesian loan of £6 million, 1967-69, at 3½% issued at £98% was oversubscribed. Central African Airways flew 19,981,538 passenger-miles and carried 690,385 kg. of freight in 1949. The mineral output for 1949 was a record and amounted to £11,293,201. The capital of Wankie colliery was increased from £1,700,000 to £3,400,000. The Mining Affairs board was established to absorb the Royalty Review committee and the Mining Settlement board.

Education. European (1949): government primary schools 72, pupils 12,400, teachers 447; high schools 14, pupils 4,600, teachers 265; aided private schools 22, pupils 3,650; aided farm schools 13, pupils 195. Asian and mixed (1950): government primary schools 12, pupils 1,774, teachers 60; aided schools 4, pupils 886. Native (1949): primary schools 2,069, pupils 210,021, teachers 5,685 African and 226 European; post-primary schools, 10, pupils 974. Teacher training schools 18.

Industry. Fuel and power: coal (1949) 2,114,000 long tons, (Jan.-June 1950) 1,146,000 long tons; electricity (1949-50) 219 million units sold. Raw materials (1949; Jan.-June 1950 in brackets): gold 528,000 oz. (253,000 oz.); asbestos 80,000 long tons (36,000); chrome 268,000 long tons (160,000).

Agriculture. Tobacco (Virginia, 1949-50): 102,500,000 lb. Livestock (1949): cattle 3,004,000, sheep 315,000, goats 542,000, pigs 107,000, poultry (European production only) 552,000.

Foreign Trade. Imports (1949) £54,586,000, exports £29,621,000, re-exports £4,901,000; (Jan.-June 1950) imports £27,112,000, exports £16,397,000, re-exports £3,185,000.

Transport and Communications. Main roads (1950): *c.* 15,600 mi. incl. 2,500 mi. hardsurfaced. Railways: 1,352 mi.; (1949) passenger traffic 2,395,253, goods 5,163,159 long tons; (Jan.-May 1950) passenger traffic 920,882; goods 2,311,428 long tons.

Finance and Banking. Currency: Southern Rhodesian pound (at par with £ sterling); circulation incl. Northern Rhodesia and Nyasaland (Aug. 1949) £8,326,000. Budget: (1949-50) revenue £16,769,832, expenditure £14,843,783; (1950-51 est.) revenue £16,621,000, expenditure £16,620,579. National debt (1950) £83,696,898. National income (1949 est.) £72,700,000. (G. R. MN.)

SOUTH PACIFIC COMMISSION.

This advisory body, set up by agreement in 1947, was designed to develop by international co-operation the economic and social welfare of the inhabitants of the territories administered by its members in the south Pacific. Its members were Australia, France, the Netherlands, New Zealand, the United Kingdom and the U.S. The permanent headquarters of the commission were at Nouméa in New Caledonia and it had two auxiliary bodies, the research conncil and the South Pacific conference. In 1949 the research council drew up a programme of 28 research projects, of which 13 were concerned with economics, 10 with social development and 5 with health. During 1950 work was started on several of these projects, including a mass education experiment and a tuberculosis survey.

On April 24, 1950, the first meeting of the South Pacific conference was opened at Suva, Fiji, under the chairmanship of the high commissioner for the western Pacific islands, Sir Brian Freeston. The purpose of this conference was to enable native representatives from all the islands included in the sphere of the South Pacific commission to meet together periodically to discuss and promote matters concerned with their common welfare. Never before had the leaders of those 3 million people whose homes are scattered over 10 million sq.mi. of the Pacific world been able to meet together. Many of them, in fact, had little knowledge of each other or of their common problems. All the delegates were prominent members of their local communities, and one of them was a woman, the paramount chieftainess of Rarotonga. Administrative officials attended only as advisers. The conference lasted two weeks. It was a lively and practical affair and the discussions ranged over a wide field including economic, social and health conditions, the diversification of crops, fishing methods, handicrafts and the co-operative movement. Crown Prince Tungi, of Tonga, a graduate of Sydney university, was probably the most outstanding among the delegates. In his closing address Sir Brian Freeston said that the conference had been a most successful experiment. It had, he said, " dropped a large pebble in the pool of the Pacific and nobody can tell how far the ripples will extend." It had produced striking evidence of the fraternal regard among the Pacific peoples and of their desire for advancement. The Conference was to meet at least once in every three years.

The South Pacific commission itself held its fifth meeting at Suva after the close of the conference, its main business being to consider the recommendations made by the conference. The research council held its second meeting in Sydney in August and the commission met again at Suva in October. Most of the research projects already undertaken by the commission were in progress and the commission was mainly occupied at that stage in reviewing the work and planning future developments. Two projects, a scheme of agricultural research in Fiji and the collection of information in connection with the world census of agriculture, were completed during the year. (K. G. B.)

SOUTH-WEST AFRICA:

see SOUTH AFRICA, THE UNION OF; TRUST TERRITORIES.

SOVEREIGNS, PRESIDENTS AND RULERS.

The following list includes the names of those holding chief positions in their countries as on Dec. 31, 1950:

Country	*Name and Office*	*Accession*
AFGHANISTAN	Mohammad Zahir Shah, king	1933
	Shah Mahmud Khan, prime minister	1946
ALBANIA	Omer Nishani, chairman of the presidium of the People's Assembly	1946
	General Enver Hoxha, prime minister	1944
ARABIA, SAUDI	Abdulaziz ibn Abdurrahman ibn Faisal ibn Sa'ud, king	1927
ARGENTINA	General Juan Domingo Peron, President	1946
AUSTRALIA	William John McKell, governor general	1947
	Robert Gordon Menzies, prime minister	1949
AUSTRIA	Karl Renner, federal president*	1945
	Leopold Figl, chancellor	1945
BAHREIN	Sulayman bin Hamid al Khalifa, sheikh	1942
BELGIUM	Baudouin, prince royal	1950
	Joseph Pholien, prime minister	1950
BHUTAN	Jigme Wangchuk, ruler	1927
BOLIVIA	Mamerto Urriolagoitia, president	1949
BRAZIL	General Eurico Gaspar Dutra, president†	1946
BULGARIA	Gheorghi Damianov, chairman of the presidium of the National Assembly	1950
	Vlko Chervenkov, premier	1950
BURMA	Sao Shwe Thaik, president of the Union of Burma	1948
	Thakin Nu, prime minister	1948
CANADA	Field Marshal Viscount Alexander of Tunis, governor general	1946
	Louis Stephen St. Laurent, prime minister	1948
CEYLON	Lord Soulbury, governor general	1949
	Don Stephan Senanayake, prime minister	1948

Country	Name and Office	Accession
CHILE	Gabriel González Videla, president	1946
CHINA — Republic (Nationalist)	Chiang Kai-shek, president	1943
	General Chen Cheng, premier	1950
CHINA — People's Republic (Communist)	Mao Tse-tung, chairman of the Central People's government council	1949
	Chou En-lai, chairman of the State Administrative Council	1949
COLOMBIA	Laureano Gómez Castro, president	1950
COSTA RICA	Otilio Ulate Blanco, president	1949
CUBA	Carlos Prío Socarrás, president	1948
CZECHOSLOVAKIA	Klement Gottwald, president	1948
	Antonín Zápotocký, premier	1948
DENMARK	Frederick IX, king	1947
	Erik Eriksen, prime minister	1950
DOMINICAN REPUBLIC	General Rafael Leónidas Trujillo y Molina, President	1942
ECUADOR	Galo Plaza Lasso, president	1948
EGYPT	Farouk I, king	1936
	Mustafa el Nahas Pasha, prime minister	1950
ETHIOPIA	Haile Selassie I, emperor	1930
	Bitwodded Makonnen Endalkachaw, prime minister	1944
FINLAND	Juho Kusti Paasikivi, president	1946
	Urho Kaleva Kekkonen, prime minister	1950
FRANCE	Vincent Auriol, president of the republic	1947
	René Pleven, premier	1950
GERMANY — (Eastern) Democratic Republic	Wilhelm Pieck, president	1949
	Otto Grotewohl, minister-president (premier)	1949
GERMANY — (Western) Federal Republic	Theodor Heuss, federal president	1949
	Konrad Adenauer, federal chancellor	1949
GREAT BRITAIN	George VI, king	1936
	Clement Richard Attlee, prime minister	1945
GREECE	Paul I, king	1947
	Sophocles Venizelos, premier	1950
GUATEMALA	Juan José Arévalo, president‡	1945
HAITI	Paul E. Magloire, president	1950
HONDURAS	Juan Manuel Gálvez, president	1949
HUNGARY	Sándor Rónai, chairman of the presidium of the National Assembly	1950
	István Dobi, premier	1948
ICELAND	Sveinn Björnsson, president	1944
	Steingrimur Steinthorsson, prime minister	1950
INDIA	Rajendra Prasad, president of the republic	1950
	Jawaharlal Nehru, prime minister	1947
INDO-CHINA — Cambodia	Norodom Sihanouk, king	1941
INDO-CHINA — Laos	Sisavang Vong, king	1949
INDO-CHINA — Vietnam	Bao Dai, chief of state	1949
INDONESIA	Ahmed Sukarno, president	1949
	Mohammed Natsir, premier	1950
IRAQ	Faysal II, king	1939
	Abdulilah, prince regent	1939
	Nuri es Said Pasha, prime minister	1950
IRELAND	Seán Thomas O'Kelly, president	1945
	John Aloysius Costello, prime minister	1948
ISRAEL	Chaim Weizmann, president	1948
	David Ben-Gurion, prime minister	1948
ITALY	Luigi Einaudi, president	1948
	Alcide De Gasperi, premier	1946
JAPAN	Hirohito, emperor	1926
	Shigeru Yoshida, premier	1948
JORDAN	Abdullah ibn Hussein, king	1946
	Samir el Rifai Pasha, prime minister	1950
KOREA — (South) Republic of Korea	Syngman Rhee, president	1948
	Shin Sung Mo, premier	1950
KOREA — (North) Democratic People's Republic	Kim Du Bon, chairman of the presidium of the Supreme People's Assembly	1948
	Kim Ir Sung, premier and commander in chief	1948
KUWAIT	Abdullah bin Salim al Subah, sheikh	1950
LEBANON	Bishara Khalil el Khuri, president	1943
	Riad Bey es Sulh, premier	1946
LIBERIA	William V. S. Tubman, president	1944
LIECHTENSTEIN	Franz-Joseph II, sovereign prince	1938
	Alexander Frick, prime minister	1945
LUXEMBOURG	Charlotte, grand duchess	1919
	Pierre Dupong, premier	1937
MEXICO	Miguel Alemán Valdes, president	1946
MONACO	Rainier III, sovereign prince	1949
MONGOLIA	Bumatsende, chairman of the presidium of the Little Hural	1940
	Marshal Choibalsan, premier and commander in chief	1935
MOROCCO	Mohammed ben Youssef III, sultan	1927
	General Alphonse-Pierre Juin, French resident general	1947
NEPAL	Gyanendra Jung Bahadur Rana, king	1950
	General Sir Mohan Shumshere Jung Bahadur Rana prime minister	1948
NETHERLANDS	Juliana, queen	1948
	Willem Drees, prime minister	1948
NEW ZEALAND	Sir Bernard Freyberg, governor general	1946
	Sidney George Holland, prime minister	1949
NICARAGUA	Anastasio Somoza, president	1950
NORWAY	Haakon VII, king	1905
	Einar Gerhardsen, prime minister	1945
OMAN (Muscat)	Said bin Taimur, sultan	1932
PAKISTAN	Khwaja Nazimuddin, governor general	1948
	Liaquat Ali Khan, prime minister	1947
PANAMA	Arnulfo Arias Madrid, president	1949
PARAGUAY	Frederico Chaves, president	1949
PERSIA	Mohammad Riza Pahlavi, shahanshah	1941
	Ali Razmara, premier	1950
PERU	General Manuel A. Odría, president	1950
PHILIPPINES	Elipidio Quirino, president	1948
POLAND	Bolesław Bierut, president	1947
	Józef Cyrankiewicz, premier	1947
PORTUGAL	Marshal António Oscar de Fragoso Carmona president	1928
	António de Oliveira Salazar, premier	1932
RUMANIA	Constantin Parhon, chairman of the presidium of the National Assembly	1948
	Petre Groza, premier	1945
SALVADOR, EL	Lieut. Colonel Oscar Osorio, president	1950
SIKKIM	Tashi Namgyal, ruler	1914
SOUTH AFRICA	Gideon Brand van Zyl, governor general	1946
	Daniel François Malan, prime minister	1948
SOUTHERN RHODESIA	Sir John Noble Kennedy, governor	1946
	Sir Godfrey Huggins, prime minister	1933
SPAIN	General Francisco Franco, chief of state and premier	1938
SWEDEN	Gustaf VI Adolf, king	1950
	Tage Fritiof Erlander, prime minister	1946
SWITZERLAND	Eduard von Steiger, president of the confederation	1951
SYRIA	Hashem el Atassi, president	1949
	Nazim el Kodsi, premier	1950
THAILAND	Phumiphon Adundet, king	1946
	Marshal Luang Pibul Songgram, premier	1948
TUNISIA	Mohammed el Amin, bey	1943
	Marcellin-Marie-Louis Périllier, French resident general	1950
TURKEY	Celâl Bayar, President	1950
	Adnan Menderes, premier	1950
UNION OF SOVIET SOCIALIST REPUBLICS	Nikolay Mikhailovich Shvernik, chairman of the presidium of the Supreme Soviet	1946
	Joseph V. Stalin, chairman of the council of ministers	1941
UNITED STATES	Harry S. Truman, president	1945
URUGUAY	Luis Batlle Berres, president§	1947
VATICAN CITY	Pius XII, pope	1939
VENEZUELA	Germán Suárez Flamerich, provisional president	1950
YEMEN	Ahmed ibn Yahya, imam	1948
YUGOSLAVIA	Ivan Ribar, chairman of the presidium of the People's Assembly	1945
	Josip Broz (Tito), premier	1944
ZANZIBAR	Khalifa bin Harub, sultan	1911
	Sir Vincent Glenday, British resident	1946

* Renner died on Dec. 31, 1950.

† Getulio Dornelles Vargas, elected on Oct. 3, 1950, to take office on Jan. 31, 1951.

‡ Jacobo Arbenz Guzman elected Nov. 10-12, 1950, to take office March 15, 1951.

§ Andres Martinez Trueba, elected on Nov. 26, 1950, to take office on March 1, 1951.

SOVIET UNION: *see* UNION OF SOVIET SOCIALIST REPUBLICS.

SPAIN. Country of southwestern Europe, bounded N. by the Bay of Biscay and France, W. by the Atlantic and Portugal, and S. and E. by the Mediterranean. Area: 194,945 sq.mi., including Balearic (1,936 sq.mi.) and Canary (2,804 sq.mi.) Islands. Pop.: (1940 census) 25,877,971; (1950 est.) 28,286,518, including Balearic (1940 census, 407,497) and Canary (680,294) Islands. Language: mainly Spanish (Castilian) but Catalan, Galician and Basque are also spoken. Religion: mainly Roman Catholic. Chief towns (pop., 1947 est. if not otherwise stated): Madrid (cap., 1950 est., 1,440,041); Barcelona (1950 est., 1,268,973); Valencia (562,967); Seville (382,013); Zaragoza or Saragossa (292,965); Málaga (277,582); Murcia (226,702); Bilbao (220,333). Leader (*Caudillo*), chief of state and prime minister, General Francisco Franco y Bahamonde (*q v.*).

History. A statement by Dean Acheson, the U.S. secretary of state, announced on Jan. 19, 1950, the readiness of the United States to vote in the general assembly of the United Nations for a resolution which would leave members free to send an ambassador or minister to Spain if they chose. This " would in no sense signify approval of the regime ": it was designed to resolve an anomalous position. On May 1 Daniel F. Malan said that South Africa was considering the establishment of diplomatic relations with Spain; and António de Oliveira Salazar urged again, on Aug. 10, the formation of a " front of intelligence " against Communism and the revision of the western powers' attitude to Spain. When the general assembly met in September it became certain that the decision of Dec. 1946 recommending the withdrawal of diplomatic representatives and excluding Spain from the specialized agencies of the United Nations would be rescinded. The motion to this end, presented by a group of Latin-American states, was carried on Nov. 4 by 38 votes to 10 with 12 abstentions (among these Great Britain, France and the Scandinavian countries). Mexico, Uruguay and Guatemala voted against. Of the 1946 resolution there still remained the general condemnation of the Franco regime and the ban on full Spanish membership of the United Nations. Turkey was among the first countries to resume diplomatic relations,

it being proposed to raise the two legations to the rank of embassies, as Spain had already done with Colombia in February and later with Ireland and El Salvador. Prior to the vote, there were in Madrid 9 ambassadors and 17 ministers plenipotentiary.

There was much satisfaction in Spain at the " recantation." " The world is coming round to our way of thinking," the minister of labour, J. A. Girón de Velasco, had said on the 14th anniversary of the outbreak of the Civil War (July 18); " yet we have not swerved from the line that we took 14 years ago." A few days earlier the despatch of the Blue division to Russia in 1941 was commemorated with unusual fervour. Complacency was tempered, none the less, by the persisting moral condemnation and by the desire to await practical economic results of the *volte-face*. General Franco, who made a ten-day tour of Spain's west African possessions and the Canary Islands in October, ending with a naval review at Cadiz, had made an impassioned attack at Las Palmas on the " false democrats " who continued to cold-shoulder Spain and make her go hungry while ladling out dollars to the rest of the world. Alberto Martín Artajo, the foreign minister, speaking after the United Nations vote, asked for reparation for the injuries inflicted on the Spanish people by four years of unjust ostracism and said that according to the treatment given to her in future Spain would decide whether she could " usefully and with dignity " share in the tasks of the international agencies. The U.N. Food and Agriculture organization admitted Spain to full membership on Nov. 10. The U.S. Department of Justice had ruled earlier (Oct. 19) that members of the Falange, Spain's only legal party, were debarred from entry into the U.S., as members of a " totalitarian group," under the new Internal Security act.

An apparent Spanish reluctance to develop normal trading relations with the U.S. was referred to in January by Acheson, who noted that Spain had shown no interest in the offer of a new treaty of friendship, commerce and navigation nor in the request for a simplified foreign exchange system whereby Spanish goods might compete in the dollar market. Repeated offers of dollar loans from the Import-Export bank had evoked an extraordinarily tardy response, according to the U.S. *chargé d'affaires*, speaking in Barcelona in May, who added that existing legislation made it appear that American capital was not attractive to Spain. On Aug. 1 the U.S. Senate voted an amendment to the General Appropriation act in favour of granting a $100 million loan to Spain through the Import-Export bank; a proposal that the money should come instead from Economic Co-operation administration funds was defeated. President Harry S. Truman expressed opposition, not to the loan as such, but to the method invoked, and refused to regard the provision inserted in the act as a directive, " which would be unconstitutional," but simply as an additional authorization: " Money will be loaned to Spain whenever mutually advantageous arrangements can be made with respect to security, terms of repayment, the purposes for which the money is to be spent and other appropriate factors, and whenever such loans will serve the interests of the U.S. in the conduct of foreign relations." In mid-November President Truman sanctioned a $62·5 million credit to Spain, to be spent on industrial equipment and consumer goods. Orders were placed in England for close on £3 million worth of electric locomotives for the Spanish national railways (April) and for hydro-electric machinery totalling over £1·3 million (June).

New exchange rates for foreign tourists and for remittances from abroad to residents in Spain were announced on Aug. 1: the £ rate rose from P. 70 to 110·32 and the $ rate from P. 25 to 39·40. In October a new system of state-controlled cheap exchange came into force for essential imports of raw materials or semi-manufactured goods. For non-essential goods foreign exchange would be obtainable only through the Madrid free markets, at much higher rates. Fiduciary circulation was limited by decree, also in October, to P. 30,000 million, this figure showing an increase of P. 4,500 million in three years, and it was announced that the provisions of the current budget would remain in force until the end of the next financial year.

Trade agreements were signed with Greece in February, providing for $2 million worth of goods in each direction and the settlement of claims pending since the Spanish Civil War, and with Western Germany in April, this being a revision intended to double the existing volume of trade to a total of $99 million. The deterioration of trade relations with Argentina, through Spain's inability to fulfil her undertaking to build ships, supply railway and other material and construct a free port at Cadiz, seriously aggravated the difficulties of the economic situation. It culminated in January in the withholding by Argentina of further wheat shipments pending the settlement by Spain of a debt of over P. (gold) 84 million; 50,000 tons of wheat were hastily purchased from the U.S. and Canada, and a further 60,000 tons from Australia. In July Spain decided to join the World Wheat board and undertook to purchase 100,000 metric tons of wheat a year. The total wheat needed from abroad in 1950 was estimated at 500,000 tons, as against 350,000 tons imported in 1949. Speaking in May of the need to increase food production, General Franco said that in many parts of Spain the climate made the breaking-up of large estates impracticable. Irrigation was the key to the problem, and Spanish prosperity depended on the government's success in developing hydraulic power, the production of fertilizers and technical methods of cultivation.

A strike of taxi-cab drivers in Madrid in January, following on others by bank clerks and students, betokened the growing unrest accompanying the general economic hardship. Strikes in Spain were illegal. University engineering students threatened a strike in October in protest against a decree allowing a Jesuit technical college to issue its own degrees; it was called off when the government promised a commission of enquiry into the whole field of technical instruction and qualifications. The editor of the Madrid *ABC* was indefinitely suspended for refusing to publish an editorial on the matter on lines indicated by the Press and Censorship department. Rail fares and freight charges were increased in April by 40% and 60% respectively, to allow of wage increases of up to 50% for lower-paid railway employees, and taxi fares in Madrid rose again. Bull-fighting shared in the general depression. In 1949 the number of full-scale six-bull *corridas* fell from an average of 250 to below 180. The use of explosive darts in the bull-ring was at last abolished, after a century, as technically ineffective. In view of the extreme gravity of the hydro-electric situation, following on persisting drought in the central and eastern areas, Madrid experienced in October the most drastic light and power cuts yet imposed. The industrial use of electric power was restricted to three hours on three days a week.

General Franco and his government again attended, on March 1, a memorial mass at El Escorial to mark the anniversary of King Alfonso XIII's death in 1941, while monarchists attended a rival mass in Madrid organized by the Council of Grandees. Five royalist propagandists had been arrested a week earlier; after trial by court-martial in June, the Duchess of Valencia and another were acquitted but three received prison sentences. Eighteen prisoners, one an ex-civil governor of Madrid under the republic, Antonio Trigo, were charged before a Madrid military court in March with planning an alliance between the banned anarcho-syndicalist C.N.T. (Confederación Nacional del Trabajo) and more moderate opposition elements; prison sentences were imposed.

In September General Franco declared that there were no political prisoners in Spain; the total prison population of 33,357 was lower than under either the monarchy or the republic.

Of 268 foreigners rounded up by French security police as suspect agitators on Sept. 17, 150 were Spaniards; most of these were apprehended in the Pyrénées region, where a year earlier an arms depot had been discovered. Two days later the Spaniards were shipped to Algeria and interned in a camp in the desert region south of Oran. Fewer than 30 had preferred the alternative of being sent behind the "iron curtain." The men were stated to belong to a clandestine Communist Agrupación de Fuerzas Armadas Republicanas Españolas under the orders of the Spanish republican General Enrique Lister. Henri Queuille, French minister of the interior, declared illegal both the Spanish Communist party, with headquarters in S.W. France, and the Unified Socialist Party of Catalonia (Pyrenean France), and suppressed the Spanish Communist party newspaper *Mundo Obrero*.

General Franco marked the July 18 celebrations with a long honours list. The title of count was conferred on Dr. H. Arruga, surgeon and eye specialist, who on the day previous had received the Gonin Medal at the International Congress of Ophthalmology in London. The 1940 figure of 109 deaths per 1,000 under the age of one fell in 1950 to 68, and deaths in childbirth from 2·9 to 1·2 per 1,000 births. Count Romanones, three times liberal prime minister under the monarchy and the most notable survivor of the *ancien régime*, died in Madrid in August, aged 83 (*see* OBITUARIES.)

(W. C. AN.)

Education. Schools (1947): primary 54,055 (62,116 in 1950), pupils 2,649,315, teachers 55,077; secondary 119, teachers 3,001, pupils 31,668; commercial 32, teachers 579, pupils 57,694; technical 123, teachers 2,127, students 45,229; training colleges for elementary teachers 53, students 25,928; universities 12, teaching staff 3,079; students 42,597; institutes of higher education 34, teaching staff 570, students 19,242. Illiteracy (1947): 20·8%.

Agriculture and Fisheries. Main crops ('000 metric tons, 1948; 1949 in brackets): wheat 2,670 (2,580); barley 1,460 (1,460); oats 450 (500); maize 480 (540); rye 380 (460); rice, paddy 235 (260); sugar, raw value 261 (155); potatoes 3,050 (3,500); tobacco 14; oranges and tangerines 814; lemons 65. Production: wine (1948) 15 million hectolitres. Olive oil (1949) 300,000 metric tons. Livestock ('000 head): cattle (Dec. 1948) 4,000; sheep (Dec. 1949) 22,000; pigs (July 1946) 4,700; horses (1947) 600; asses (1947) 800; mules (1947) 1,080; goats (1947) 6,100; chickens (July 1950) 35,000. Meat production (1949): 110,000 metric tons. Wool production, greasy basis (1949) 35,000 metric tons. Fisheries: total catch (1948): weight 533,979 tons; value P.1,777 million.

Industry. Fuel and power (1949; 1950 six months, in brackets): coal ('000 metric tons) 10,644 (5,496); lignite 1,320 (653); manufactured gas (million cu. metres) 256 (141); electricity (million kwh.) 5,040; (3,445). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): iron ore, metal content, 1,812 (1,001); pig iron 610 (328); steel ingots and castings 720 (409); black and blister copper 11·80; lead 27·4 (16·6); zinc 19·5 (10·1); manganese ore 17·7 (8·6); potash ore 913·5 (506·8). Manufactured goods ('000 metric tons, 1949; 1950, six months, in brackets): cement 1,860 (1,070); cotton yarn 59·5 (29·4); wool yarn 8·9 (5·0); rayon filament yarn 6·72 (4·88); rayon staple yarn 11·9 (7·3).

Foreign Trade. (Million gold pesetas, 1949; 1950, six months, in brackets) Imports 1,390 (606); exports 1,164 (579). Main sources of imports (1949): Argentina 17%; U.K. 15%; Netherlands 11%; U.S. 10%. Main destinations of exports (1949): U.K. 29%; France 11%. U.S. 6%; Netherlands 4%. Main imports include: raw cotton, chemical fertilisers, petroleum products, machinery and foodstuffs. Main exports include: oranges, wines, conserved food, cotton goods, almonds, cork and olive oil.

Transport and Communications. Roads (1949): 75,000 mi. Licensed motor vehicles (Dec. 1949): cars 70,000; commercial 83,000. Railways (1949): 10,920 mi.; passenger-mi. 4,534 million; freight net ton-mi. 3,438 million; freight carried 25 million tons. Shipping (July 1949): merchant vessels over 100 gross tons 1,181, total tonnage 1,200,336. Air transport (1948): km. flown 4,358,670, passengers flown 163,106, cargo carried 471 metric tons, air mail carried 160 metric tons. Telephones (1948): subscribers 537,837. Wireless sets (1949) 375,635.

Finance and Banking. (Million pesetas) Budget: (1949, actual) revenue 16,071, expenditure 16,629; (1950 est.) revenue 17,848, expenditure 17,941. Currency circulation (June 1949; June 1950 in brackets): 24,900 (27,500). Gold reserve (million U.S. dollars, June 1949; June 1950 in brackets): 85 (61). Bank deposits (million pesetas, June 1949; June 1950 in brackets): 32,000 (33,800). Monetary unit: *peseta* with an official exchange rate (Nov. 1950) of P. 30·66 to the pound and P. 10·95 to the U.S. dollar.

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SPANISH-AMERICAN LITERATURE.

During the year 1950 exciting signs of vitality were apparent in all the literary genres. Perhaps the most widely acclaimed novel was Luis Durand's *Frontera*, which won the Atenea prize (Chile) as well as numerous local and national honours. Another outstanding novel was *La sangre hambrienta* by the young Cuban Enrique Labrador Ruiz; his work is darkened, however, by the baroque profusion of its style. Significant, too, was *Milpa, potrero y monte*, by the well-known novelist of the Indians and the Mexican revolution, Gregorio López y Fuentes. A number of short-story collections appeared: in *Cafe de angelitos* the Argentine Bernardo Verbitsky exhibited the most varied milieux of Buenos Aires; in *Treinta hombres y sus sombras*, the veteran Arturo Uslar-Pietri gave a splendid picture of rural life in his native Venezuela, comparable in theme and brilliant style to *Hombres de maiz* by the Guatemalan Miguel Angel Asturias, a powerful tale in which corn, the symbol of American civilizations, is the allegorical deity and central protagonist. Among newcomers of promise mention may be made of the Colombian Hernando Téllez for his striking tales in *Cenizas para el viento* and of the Chilean Julio Silva Lazo, whose collection *Hombres de Reloncavi*, introduced encomiastically by Mariano Latorre, showed unsurpassed freshness and spontaneity.

In the realm of poetry the most important event of the year was the publication of Pablo Neruda's masterpiece, his long-awaited *Canto general*. For years Neruda had been weaving a complex tapestry of his idolized America in which prehistoric threads were interwoven with indigenist and contemporary threads into a most exciting pattern of adoration, vituperation, exhortation and tender prayer. A colour illustration by Diego Rivera and another by David Alfaro Siqueiros enhanced and, to a certain extent, emphasized some of Neruda's leitmotivs. A poet who was becoming well established throughout Latin America was Antonio de Undurraga, also of Chile. His *Red an el génesis* won him homage in Buenos Aires. Two belated modernists came to the fore from Guatemala: Roberto Girón (*El paraíso fingido*) and José Humberto Hernández Cobo (*El resucitado*). The Cuban poet Cintio Vitier came close to fulfilling his lyrical promise in *Substancia*, a poetry of a remarkably calm, pure flow, devoid of bombast and rhetoric. Spanish America lost one of its finest poets when the 46-year-old Xavier Villaurrutia died on Dec. 25, 1950, in his native Mexico City.

Chief among the numerous biographies celebrating the centenary of Gen. José de San Martín were Carlos Obargurens *San Martín intimo*, Bernardo González Arrili's *San Martín* and Luis Busaniche's *San Martín vivo* A remarkable biography by the well-known Venezuelan critic Mariano Picón-Salas was *Pedro Claver, el santo de los esclavos*, who championed the cause of Negro slaves. Angel Torres González, the noted journalist of Mexico City's *El Nacional*, in *La tumba de Cuauhtemoc* described vividly the recent discovery of the remains of Cuauhtemoc in the town of Ixcateopan, and then proceeded to weave around this find all the legendary and folkloric material which had come down by oral tradition about the Aztec emperor. In *Nayjama* the Bolivian critic Fernando Diez de Medina evoked with impassioned lyricism the setting of pre-Incan civilizations, those remote, telluric cultures which flourished on the Andean summits long before the days of Manco Capác.

The field of biography further produced an excellent work on the 19th-century Mexican romantic poet Manuel Acuña. Its author, Francisco Castillo Nájera, former Mexican ambassador to the United States, succeeded brilliantly in bringing the poet to life; as a poet himself and a physician he understood both Acuña's emotional tensions and the illnesses which led him to suicide at the age of 23.

Among the numerous important studies of Latin-American origins first mention must be made of two major works: a panoramic survey of Ecuador by Leopoldo Benítez in his trenchant *Ecuador: Drama y paradoja*, and the exhaustive *Geografía de Mexico*, in two volumes, by Jorge L. Tamayo. On a more philosophical plane were *Extremos de América* by the Mexican economist and sociologist Daniel Cosío Villegas; *Dos epocas en el pensamiento en Hispano-américa* by the young Mexican philosopher Leopoldo Zea; and the provocative *Espiritualismo y positivismo en el Uruguay* by A. Ardao.

(A. FLO.)

SPANISH COLONIAL EMPIRE. Under this heading are grouped the Spanish possessions in Africa. Their total area is approximately 134,715 sq.mi. and the total population (1947 est.) 1,536,000. Certain essential information on the territories composing the empire is given in the table.

History. Four hundred Moslem pilgrims sailed from Ceuta and Melilla to Mecca in July: they carried with them, as gifts to the Arab league for distribution among refugees from Palestine, quantities of cloth, sandals, preserved fish and pharmaceutical products. A street in Ceuta was named after Sir Alexander Fleming, co-discoverer of penicillin, in September. From October the Spanish-Moroccan *bachillerato* was recognized as admitting to Egyptian universities; it had already been so recognized in the Lebanon.

General Francisco Franco left Madrid by air on Oct. 19 for a 4-day visit to Spanish West Africa; it was the first time these territories had ever been visited by a Spanish head of state. Accompanying General Franco and his wife were the ministers of home affairs, air, industry and commerce and public works, in earnest of the government's concern with the economic needs and potentialities of the region. Sidi Ifni was the first port of call. General Franco stated that Ifni, with a population now increasing at the rate of 1,000 a year, would shortly have an abundant water supply and a new fishing port. Medical and school services were being steadily expanded. " I promise you," said Franco to a large assembly of Spaniards and natives, " that the well-being a Spaniard may enjoy in Spain you will enjoy here." Cabo Juby and El Aaiun, in the Spanish Sahara, were next visited, General Franco and his party then leaving for the Canary Islands. A new air service linking Tetuan with Gibraltar was inaugurated in November. (W. C. AN.)



General Franco addressing a crowd in Sidi Ifni during his visit to Spanish colonies in Oct. 1950.

SPANISH LITERATURE. Notable among Spanish creative writers in 1950 were the poets Leopoldo Panero, Luis Rosales, Luis Felipe Vivanco, J. L. Cano (*Sonetos de la Bahía*) and Gabriel Celaya (*Deriva*) and the essayist Pedro Rocamora (*El Museo imaginario*). The most important contribution to topography was José Pla's *Mallorca, Menorca e Ibiza*. Two much-read political works, R. Calvo Serer's *España sin problema* and J. M. Doussinague's *España tenía razón, 1939-45*, have self-explanatory titles. *España musulmana*, the fourth volume of the great *Historia de España* edited by Ramón Menéndez Pidal, was written by E. Lévi-Provençal and translated by E. García Gómez. Two other outstanding historical works were R. Menéndez Pidal's *El Imperio hispánico y los cinco reinos* and J. M. Doussinague's *El Testamento político de Fernando el Católico*

SPANISH COLONIAL EMPIRE

Country	Area (in sq.mi.)	Population (1947 est.)	Capital and Status	Foreign Trade	Transport and Communications	Budget
SPANISH MOROCCO (NORTHERN AND SOUTHERN ZONES)	17,631	1,132,000 (incl. 62,438 Spaniards and 14,734 Jews)	Tetuan; protectorate; High commissioner, General Juan Varela; Khalifa (viceroy of the sultan of Morocco), Mulay Hassan ben el Mehedi	(all possessions, in millions of gold pesetas)	Roads c. 500 mi. railway 80 mi. shipping (1943) entered 307,379 N.R.T.	rev. and exp.: (1938) 111 million pesetas (1947) 211 million pesetas
CEUTA, MELILLA, ALHUCEMAS, CHAFARINAS and PEÑÓN DE VÉLEZ	82	154,000	Administered as part of Spain	(1946) imports 150·3 exports 217·4	—	—
IFNI TERRITORY	741	42,000	Sidi Ifni; colony. Governor general of Spanish West Africa, N. Rosaleny, resides at Cabo Juby	(1947) imports 526·3 exports 168·2 (1948) imports 578·4 exports 206·4	—	—
SPANISH SAHARA: RIO DE ORO	73,362	36,000*	Villa Cisneros; colony	(1949)† imports 123·0 exports 55·0	—	—
SAGUIA EL HAMRA	32,047					
SPANISH GUINEA, including FERNANDO PÓ and four small islands	10,852	172,000	Santa Isabel: colony		—	(1943) rev. 22·3 million pes. exp. 23·6 million pes.

* Excluding the nomads. † Figures for Ceuta and Melilla only.

Several important co-operative enterprises were initiated. The first volume appeared of an encyclopaedic *Historia general de las literaturas hispánicas*, edited by Guillermo Díaz-Plaja, and also the first volume of José Simón Díaz's *Bibliografía de la literatura hispana*. The first of various prolegomena to the comprehensive historical dictionary of the Spanish language being prepared by the Royal Spanish Academy was the *Introducción a la lexicografía moderna*, by its secretary, Julio Casares. The literature of the Tirso de Molina tercentenary (1948) was considerably, if somewhat belatedly, swelled by a collection of critical essays (*Estudios*) published by the Mercedarian review of that title. Six more volumes appeared of the Edición Nacional of the works of Marcelino Menéndez y Pelayo, bringing the total published up to 49.

Individual critical works of merit include Díaz Echarri's *Teorías métricas del Siglo de Oro;* M. Baquero's voluminous study, *El Cuento español en el Siglo XIX;* José Deleito y Piñuela's largely personal and anecdotic *Origen y apogeo del género chico;* and G. Torrente Ballester's *Literatura española contemporánea.* Gregorio Marañón published a critical biography of Santiago Ramón y Cajal; Concha Espina and Antonio Oliver wrote on Antonio Machado. J. M. Blecua published the first volume of his critical edition of the *Rimas* of the brothers Leonardo de Argensola.

Two noteworthy newly elected academicians were the historian Melchor Fernández Almagro and the literary critic Rafael Lapesa. Carlos Bousoño published a substantial study of Vicente Aleixandre (*La Poesía de Vicente Aleixandre. Imagen. Estilo. Mundo poético.*), who was elected to the academy last year. Deaths of the year include those of the author-statesman, Count Romanones (*see* OBITUARIES), president for 40 years of the Academy of Fine Arts, and of the Catalan historian, Antonio Rovira Virgili. (E. A. P.)

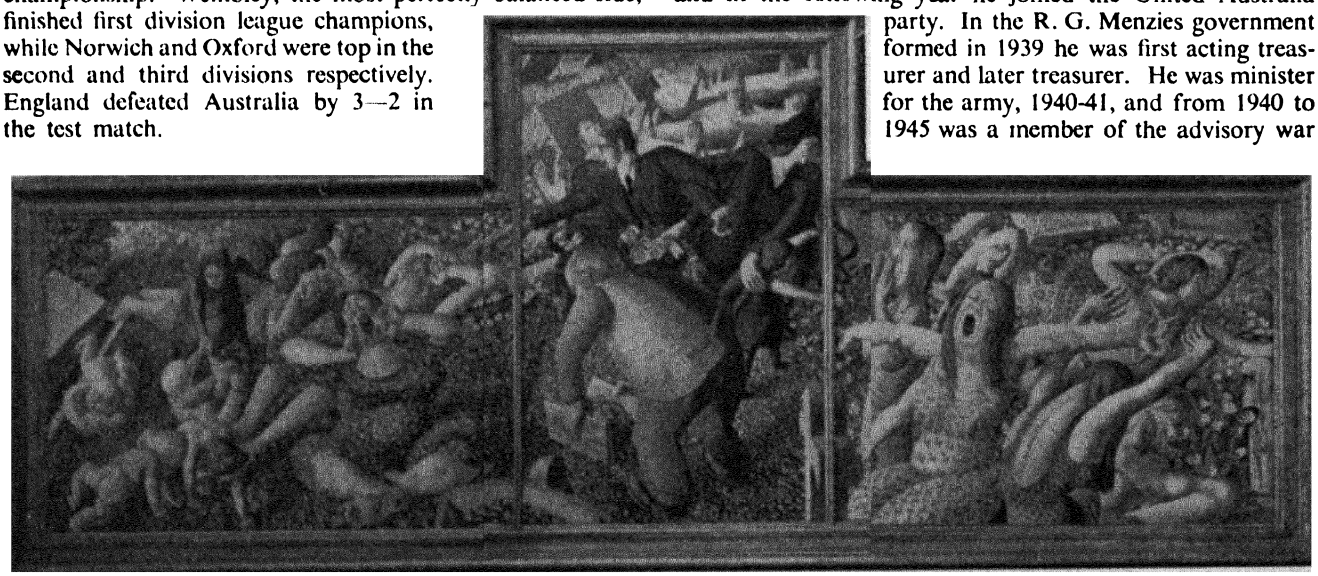
SPEEDWAY RACING. The outstanding feature of the British speedway racing season of 1950 was the brilliance of the younger riders: the places of long-experienced men were gradually being taken by those who had been racing only since their release from the forces.

The world championship title was won by 24-year-old Freddie Williams (Wembley), a native of Port Talbot, with Wally Green (31) of West Ham and Graham Warren (25), captain of Birmingham, as runners-up. Cyril Roger (New Cross) became London Riders' champion while Aub Lawson (West Ham) relieved Jack Parker of the British match race championship. Wembley, the most perfectly balanced side, finished first division league champions, while Norwich and Oxford were top in the second and third divisions respectively. England defeated Australia by 3—2 in the test match.

There was some controversy as to whether the switch from cinder to red shale riding surfaces was a success. Many meetings were postponed because of the tracks' becoming waterlogged after rain, and it seemed that promoters would have to find new methods of draining shale tracks, which do not absorb so much water as do cinders. (G. J. WK.)

SPENCER, STANLEY, British painter (b. Cookham, Berks., 1891), the son of a village organist, grew up in a home atmosphere both religious and artistic. After studying at the Slade school, London, 1909-12, he returned to Cookham, which became the scene of most of his artistic activity. His military service from 1915 to 1919 included a period in Macedonia, and he later painted a number of official war pictures, including " Travoys arriving with Wounded " (1919) at the Imperial War museum, London. More notably, however, his wartime experiences provided the impetus and the subject matter for a mural scheme, prepared as a cartoon in 1923, and executed, 1926-33, in the Oratory of All Souls, Burghclere, Berks. The series depicts soldiers in camp and on the march; a great " Resurrection of the Soldiers " covers the east wall. Resurrection is an oft-repeated theme in Spencer's work, appearing again in 1950 in paintings shown at Tooth's gallery in May, and at the Royal Academy; at the latter the Resurrection group included a 22-ft-long panel that stimulated lively controversy and was later bought by the Chantrey Bequest trustees. The main corpus of Spencer's painting consists of scenes of everyday life and Biblical history set in his native village; his work is characterized by bizarre, rotund figures, low-keyed chalky colour and a drily humorous treatment of his subjects. He was a member of the New English Art club, 1919-27, and was an A.R.A. from 1932, resigning in 1935 over the rejection of two of his pictures. In the 1950 New Year Honours he was made a C.B.E., was re-elected an A.R.A. in January and became an R. A. in March. He is represented in the Tate gallery, London, and in many municipal and overseas collections.

SPENDER, PERCY CLAUDE, Australian statesman and lawyer (b. Sydney, Oct. 5, 1897) was educated at Fort Street high school and Sydney university. His university education was interrupted by war service and in 1923 he obtained his bachelor of laws degree with 1st class honours; in 1925 he was called to the bar. Ten years later he was appointed a King's Counsel. He was elected to the House of Representatives for Warringah in 1937 as an independent, and in the following year he joined the United Australia party. In the R. G. Menzies government formed in 1939 he was first acting treasurer and later treasurer. He was minister for the army, 1940-41, and from 1940 to 1945 was a member of the advisory war



Part of Stanley Spencer's large work " The Resurrection " which was shown at the 1950 summer exhibition of the Royal Academy.

council. On the formation of the second Menzies administration in Dec. 1949, Spender was appointed minister for external affairs and external territories. He represented Australia at the Commonwealth foreign ministers' conference at Colombo, Ceylon, in Jan. 1950 and put forward a proposal for economic help to southeast Asia. The latter became known as the "Spender plan." In March he visited Papua and New Guinea and paid an official visit to President Elpidio Quirino of the Philippines. He was chairman of the Commonwealth conference on aid to southeast Asia which was opened in Sydney on May 15. On June 1 he made a statement in the House of Representatives on government policy in New Guinea and Papua and in August left Australia to visit Europe and the United States. He visited Rome, Geneva, Paris, Strasbourg, Germany and The Hague; in London he attended another Commonwealth conference on aid to Asia. He led the Australian delegation to the United Nations fifth general assembly.

SPICES. Prices were higher during 1950. All sources of supply announced advances. Serious political disturbances handicapped production, and there was a rise in the cost of ocean freight. By late August, sales of black pepper were made in India at the highest price of modern times, 20*s.* 8*d.* a pound. This was 10*s.* 8*d.* above the top figure for 1949. There was a lively increase in pepper speculation in London, New York and India. Most of the world production in 1950 went to the western hemisphere, since consumers there outbid other buyers for the available supply. Prior to World War II, Indonesia exported 125 million lb. of pepper a year (132 million lb. in 1939). From the same source, exports in 1950 probably did not exceed 9 million lb. Shipments from India during the year were three to four times greater than the combined tonnage from all other regions, and prices were controlled by a varying Indian export tax. The Indian government intensified production and enlarged its revenue by levying the maximum tax on pepper exports that the traffic would stand.

True cinnamon, which could be procured only from Ceylon, was in good supply at prices well above those of 1949. The largest market continued to be Latin America and southwestern United States. Cassia moved in large volume from China, Indonesia and Indo-China. Crops were good, and the political situations in those lands fostered early sales for quick shipment. Heavy arrivals at shipping ports caused prices to drop to levels which stimulated accumulation. Prices of cloves were high to cover rising wage rates in Zanzibar, Madagascar and Pemba. Tonnage sufficed for world needs. It was thought that the extra-fragrant Penang and Amboyna cloves, always in small supply, might soon reappear in small quantities. Production of nutmegs in Celebes, Banda, Siau and nearby islands decreased during the year. To offset the shortage of these Indonesian varieties there was a larger crop in the Leeward Islands. The volume of sales expanded despite higher prices, and supply and demand were in balance.

A 13 million-lb. crop of *Brassica alba* (mustard seed) was harvested in the U.S.; about 10 million lb. were imported. Because of its rich flavour, golden colour and assertive strength, mustard from England is preferred despite its higher cost, and the U.S. takes an annual average of 1,500,000 lb. Little was known of the 1950 plantings of *Brassica juncea* in China which had been extensive in the past. A crop of Chinese *juncea* was grown in Montana. There were neither offerings nor reports from Rumania, Poland, Eastern Germany or Hungary, where in former years the combined crops of mustard reached an impressive total. Both *Brassica juncea* and *alba* were sown in Canada but, because of an early frost, the yield was only about 60% of normal. (C. A. T.)

SPIRITS. Production of Cognac brandy in France in the 1949-50 season was equivalent to 98,510 hectolitres of pure alcohol and was thus lower than that of the previous season (123,000 hectolitres; earlier estimate 115,000). The year was an excellent one for wines suitable for Cognac and Armagnac. Distilling was started early because of the shortage of casks available for storing the wine.

In Great Britain the production of potable spirits was above that of the previous year. Partly because of uncertainty in international affairs, exports to many countries increased: the United States and Canada took 10% more than in 1949, though South Africa and Argentina took only a fraction of the amount for the year before. Total figures taken from Board of Trade statistics are given in Table I.

TABLE I. PRODUCTION, EXPORT AND CONSUMPTION OF SPIRITS IN GREAT BRITAIN (million proof gal.)

Year	Production	Export	Consumption
1948-49*	30·33	8·97	9·06
1949-50*	32·27	10·21	9·79

* Years ending Aug. 31.

Government control of grain for distilleries ceased during the year; and the release of whisky for the home market for the 1950-51 period was raised from 2 to 2·6 million proof gal., the export allocation being raised from 9 to 9·6 million. Shortage of casks was an acute problem.

In the republic of Ireland the government removed restrictions on the purchase of grain for whisky manufacture in order to stimulate an increase in stocks.

Great Britain imported more brandy from France than in 1949; rum imports were lower, those from Mauritius being considerably reduced.

In the early part of the year the French government compelled petrol importers to purchase alcohol to the extent of 10% of their imports in order to dispose of surplus stocks. Later in the year, when the United States decided to increase synthetic rubber production, an arrangement was made for France to supply 112 million gal. of alcohol over a period of 12 months for this purpose.

The use of industrial alcohol in Great Britain increased considerably during the year. Production and consumption figures taken from Board of Trade statistics are shown in Table II.

TABLE II. PRODUCTION AND CONSUMPTION OF INDUSTRIAL ALCOHOL IN GREAT BRITAIN (million proof gal.)

Year	Production (including industrial methylated spirits)	Consumption
1948-49*	36·81	46·27
1949-50*	49·95	56·23

* Years ending Aug. 31.

Rapid progress was made on a large petrochemical plant which was to supply about 25% of the industrial alcohol needs of the country. This would offset the reduction in the supply of molasses, the Cuban government having reduced its allocation to Great Britain from 60 million gal. (1949) to 50 million, partly because of a fall in production, partly because of increased demand by the United States and partly because it planned to increase the production of alcohol in Cuba. The price of Cuban molasses increased to five times the previous figure.

Several sugar-producing countries showed signs of increasing production of industrial alcohol. In India a power-alcohol industry was required to assist the sugar industry, and a target of 10 million gal. of alcohol (95%) was set for 1950; this was three times the usual production figure. In Jamaica the sugar manufacturers approached the government for authority to distil a million gallons of alcohol a year for local use as motor fuel.

In Norway a timber-products factory expected to increase its production of wood alcohol from 7 to 12 million litres for the manufacture of acetic acid, butanol and cellulose acetate. (D. I. C.)

United States. U.S. production of distilled spirits decreased by almost 60 million gallons in 1950. Whisky production fell by about 31 million gal. as the industry tried to establish steady production after war-depleted inventories had been brought into better balance with estimated demands. Similarly, production of spirits for blending and processing purposes was reduced from 93·5 million to 77 million gal. Immediately after the outbreak of the Korean war in June, the production of neutral spirits jumped noticeably and continued to increase steadily thereafter. A normal spirits inventory of about 50 million gal. had been maintained up to this time, and spirits had been produced at the rate of about 5 million to 6 million gal. monthly.

With the Korean crisis, the industry began to build up its inventories and produced, stored and used more spirits as it built up larger stocks of beverages. In October the beverage distilling industry volunteered to supply 10 million gal. of war alcohol during November and December for the government's revived synthetic rubber programme.

At the end of June 1950, government original entry gauge figures (before losses) indicated that 643 million gal. of whisky were ageing in the warehouses; allowances for leakage and evaporation left a net withdrawable inventory of 538 million gal. For the first time since 1942 the composition of age breakdowns was in relatively favourable balance.

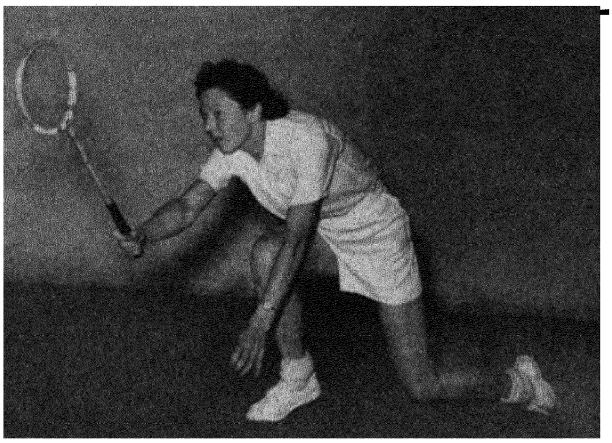
The amounts of all types of distilled spirits withdrawn tax paid from internal revenue bonded warehouses during the fiscal year 1950 showed only a slight increase—144,099,301 gal. compared with 141,766,597 gal. in 1949. However, the net increase in withdrawals of whisky was 8 million gal. This difference was directly attributable to a marked trend towards straight and bonded whisky as compared with neutral spirit blends, as shown by a decrease of 7 million gal. in the withdrawals of neutral spirits for use in blending. This trend towards straights and bonds was further borne out by increased bottled output of straight and bonded whisky—31,921,876 wine gal. in 1950, as compared with 21,469,086 wine gal. in 1949. (A. J. LI.)

SPITSBERGEN: *see* NORWAY.

SQUASH RACKETS. The season's outstanding feature was the development of international play. M. A. Karim (Egypt) won the open and professional championships in Australia and retained the British Isles open championship. Irish and Danish national teams paid first visits to England, Denmark playing Scotland also. G. J. Watson (Australia) and A. Bari (India), professionals, visited England, competing in major tournaments, the latter being runner-up in both the professional and open championships. A United States women's team visited Britain for the first time since 1939. There was an increased overseas entry for both men's and women's amateur championships.

N. F. Borrett won the men's amateur championship for the fourth successive year, a record. Miss J. R. M. Morgan won the women's championship from Miss P. J. Curry, holder for the past three years. J. P. Dear regained the professional championship after 12 years. England retained her unbeaten postwar record, beating Scotland, Ireland and Denmark. In women's internationals the chief event was the match for the Wolfe-Noel cup, which Great Britain regained from the U.S. Middlesex won the inter-county championship. Oxford beat Cambridge in the university match.

Rajkumar Narpat Singh and A. Bari retained the amateur and professional championships of western India. The new Pakistan professional championship was won by Hasham Khan. The Australian, New Zealand and South African amateur championships were won by F. L. Harris, A. M. Johns and G. Hildick-Smith respectively. (H. E. HN.)



Joan Curry, women's squash champion from 1947, playing in the 1950 championships. She was beaten in the final by J. R. M. Morgan.

STALIN (DJUGASHVILI), JOSEPH VISSARIONOVICH, Soviet statesman (b. Gori, Georgia, Dec. 21, 1879), the son of a peasant, in 1924 succeeded Lenin as supreme authority in the U.S.S.R., although he did not hold state office until May 6, 1941, when he assumed the post of prime minister. (For his early career see *Encyclopædia Britannica*).

On July 19, 1941, after the German attack, he appointed himself also c. in c. and minister of the armed forces; in March 1943 he assumed the rank of marshal of the Soviet Union. During World War II he met the leaders of Russia's wartime Allies at Tehran (Nov. 1943), Yalta (Feb. 1945) and Potsdam (July 1945). On March 3, 1947, he resigned as minister of the armed forces, retaining the post of prime minister. From Feb. 9, 1946, when he reviewed Soviet war achievements, Stalin made no public speeches and kept himself in the background. On Dec. 21, 1949, his 70th birthday was celebrated throughout the U.S.S.R. and the Soviet-dominated states, and 12 months later *Izvestia* was still continuing publication of congratulatory messages. On Feb. 13, 1950, he attended at the Hotel Metropole, Moscow, a banquet given by Mao Tse-tung and this was understood to be the first time Stalin had dined out at a public place since 1923. On June 20, 1950, *Pravda* published an article by Stalin, "About Marxism and Linguistics," which was followed by four answers to questions in the monthly *Bolshevik* (July and August).

STEEL: *see* IRON AND STEEL.

STEIGER, EDUARD VON, Swiss statesman (b. Berne, July 2, 1881) after studying at the universities of Geneva, Leipzig and Berne, practised as a lawyer in Langenthal and Burgdorf. In 1914 he was elected to the cantonal council (parliament) of Berne. During 1922-29 he was chairman for Berne of the Peasant, Artisan and Middle Class (Conservative) party. Repeatedly re-elected to the cantonal council, he was appointed director of internal affairs of the canton of Berne in 1939. The following year he was elected to the Federal Council (government) on which he served as chief of the Department of Justice and Police. He was president of the confederation in 1945 and afterwards returned to his previous office. During 1950 he served as vice president of the Federal Council and on Dec. 14 was elected president of the confederation.

STOCKS AND SHARES. The three major general influences on the London stock exchange in 1950 were:

TABLE I. MOVEMENT OF THE LONDON STOCK MARKET INDICES IN 1950
Highest and lowest monthly figures

Month	Price Indices: Government securities High	Government securities Low	Industrial ordinary High	Industrial ordinary Low	Gold mines High	Gold mines Low	Yields % on: 2½% Consols High	2½% Consols Low	Industrial ordinary High	Industrial ordinary Low	Daily Bargains High	Daily Bargains Low
Jan.	105·88	103·85	106·4	103·4	134·80	129·18	3·65	3·50	5·35	5·20	8·893	4·729
Feb.	105·80	104·66	108·2	104·2	138·36	130·26	3·59	3·52	5·31	5·09	8·434	3·787
March	104·71	104·30	105·5	103·9	138·49	130·59	3·65	3·61	5·36	5·26	8·091	4·910
April	105·56	104·64	107·4	105·4	134·56	127·01	3·64	3·60	5·28	5·18	8·166	5·569
May	106·24	105·00	112·8	107·3	128·44	124·71	3·64	3·55	5·19	4·94	7·838	5·806
June	107·28	105·32	115·1	111·9	125·37	113·45	3·64	3·51	4·98	4·84	9·732	5·427
July	106·00	105·15	112·0	110·6	112·41	106·39	3·65	3·58	5·04	4·97	7·215	5·239
Aug.	107·35	105·61	113·9	111·1	114·98	109·58	3·60	3·46	5·02	4·88	7·036	5·027
Sept.	107·75	106·78	118·2	113·3	121·40	110·08	3·53	3·45	4·91	4·70	11·754	5·387
Oct.	109·07	107·80	118·0	116·2	117·06	111·77	3·44	3·36	4·79	4·71	10·762	7·244
Nov.	108·94	106·81	118·2	114·3	114·18	105·05	3·52	3·37	4·89	4·70	11·632	8·232
Dec.	107·18	106·68	116·2	113·2	110·64	104·42	3·54	3·51	4·95	4·87	8·436	4·045

Constituents of the indices are: government securities, 11 British government securities, including short-dated, medium-dated, long-dated and some redeemable only at the option of the government; industrial ordinary, 30 of the leading British industrial equities; gold mines, 30 South and West African and West Australian gold mining shares. The industrial ordinary share yield is based on dividends in the industrial ordinary share index. Daily bargains are those recorded in the stock exchange official list. Base-dates when the indices were 100 are: government securities, 1928; industrial ordinary, July 1, 1935; and gold mines, Oct. 15, 1926. SOURCE: *Financial Times*, London.

the effects of the devaluation of the pound which had taken place in Sept. 1949; the big rises in world prices of commodities, due to stockpiling by many nations, principally the U.S.; and the decision to increase defence expenditure for the next few years. The devaluation of the pound was followed by an unexpectedly speedy improvement in the balance of payments and in the gold and dollar reserves of the sterling area. This in turn prompted a rebirth of confidence in the pound and a flow of foreign funds to London, partly in the belief that the pound, at $2·80, was now undervalued. Much of these funds sought investment in British government securities, which became a firm market and thus provided a solid foundation for the stock market price structure as a whole.

Neither the parliamentary general election in February, after which the Labour government remained in office with a much-reduced majority, nor the April budget could be described as exercising other than superficial influences. The election result exerted a temporarily depressing effect on prices. But the April budget, which showed a small overall deficit, was not an important positive factor: the main changes, as affecting share values directly, consisted of increased petrol duties and some relief for the brewery industry, so that the brewing of stronger beers at the same retail prices became possible. The beer-duty concession, however, was regarded by investors as inadequate to stem the decline in consumption, and this view was confirmed when it was seen that brewery profits and share values continued to fall throughout the year.

The prices of British government securities had receded in 1949. In 1950, however, prices were about 1% higher on the year, despite the setback caused by the Korean crisis. British government securities were always highly susceptible to changes of confidence in the pound and proved so again on this occasion. This firm trend naturally assisted the government's own operations. There was no new major issue of a Treasury-guaranteed stock for the nationalizing of an industry, as there had been in previous years, although £150 million ($420 million) of 3½% British Electricity stock, 1976-79, was issued at a price of 99% in May. A new "nationalization" stock appeared in June, when £19 million ($53·2 million) of 3½% Treasury stock, 1977-80, was issued at par (100) as partial compensation to former colliery owners; and in December another £27 million ($75·6 million) of the same stock was issued at 103%. The higher issue terms indicated the extent of the improvement that had occurred in this type of security during the course of six months.

Perhaps the biggest surprise of the year in the gilt-edged section was the decision of the government to offer holders of £714 million ($1,999·2 million) of 2½% national war bonds, 1949-51, the opportunity to convert their holdings into 2½% Funding loan, 1956-61, at par, with a cash adjustment; at the same time an additional £100 million ($280 million) of 2½% funding, 1956-61, was offered for cash subscription at 99½%. Holders of £505 million ($1,414 million) of 2½% national war bonds accepted the offer. In November notice of redemption was given for the remaining £209 million ($585·2 million), and at the same time £250 million ($700 million) of 3% funding stock, 1966-68, was offered at par both for public subscription and for conversion of the remaining £209 million.

The years 1947, 1948 and 1949 had seen British industrial shares falling at a gradually increasing pace. In 1950, however, this trend was reversed, and there was an improvement of 8% (*Financial Times* index) on the figure for 1949. In its early stages, when the inflationary, rather than the war, aspect of rearmament was pushing prices upwards, the turnround was hailed by stock market observers as the beginning of a bull market. But the critical turn taken by events in Korea towards the end of the year checked confidence in this belief, as it became more apparent that the immediate investment outlook depended on political decisions, national and international.

Psychological influences which made for higher prices at various stages of the year included the almost persistent strength of the Wall Street stock market and the derationing of petrol. The foreign bond market was helped by the liberalization of switching of securities by non-residents, under new exchange control regulations, and by the surprise redemption of a large part of Brazil's sterling bonded indebtedness. Japanese bonds closed well below the year's peaks following the fighting in Korea.

The relatively small overall rise in equity prices concealed much greater changes in individual sections of the market. For instance, shares in the shipbuilding industry, which experienced a great recovery in the tonnage of new shipping on order, rose about 60%. Those in the plastics industry, which had had a difficult time in 1949, gained about 30%, with a late spurt at the end of the year when it became apparent that articles made of many kinds of plastics would be called upon to replace articles formerly made of metals that were to come under government control again. Shares in the motor industry, which was still experiencing a vigorous sellers' market, added some 20% in value. Armament shares were, of course, one of the firmest markets. In general, fears of inflation, which were conjured up in the minds of many investors by the increased expenditure on arms, induced a reluctance to sell equities.

There was no tendency to minimize the dangers of inflation in official circles. But, as the year wore on, the belated effects of devaluation and of the big rises in world prices began to exert a strong upward pull on the cost of living; and there was some official recognition of the justice of wage and dividend increases, though the " moderation and restraint " policy remained. As a result, the company world felt itself more free to pay higher dividends (this is not to say that there was a general increase in dividends paid by British industry to investors).

Trading experience was good, but the need to retain profits in order to finance stocks at rising prices naturally made for caution in dividend distributions. In the analysis by the *Financial Times* of the results of over 2,700 industrial companies, net dividends paid on equity capital were shown to have risen from £112 million ($313·6 million) in 1949 to £116 million ($324·8 million) in 1950; but as there was proportionately a still larger increase in equity capital and reserves the actual percentage-return to holders on capital employed was slightly less. The expansion in dividend payments was, in fact, materially less than the expansion in equity earnings, which at £354 million ($991·2 million) was to be contrasted with £317 million ($887·6 million) for 1949. These figures, however, probably obscure the fact that adherence to dividend limitation was less pronounced in the latter half of the year than in the first.

Just as 1950 was a boom year for commodities—many of them produced in the sterling area by British companies—so was it a good year for commodity shares. It would have been better still but that many producers were operating in countries near possible theatres of war, such as the far east. Among the metal-producing companies, shares of copper mines fared best; the rise in copper shares was of the order of over 50%, and that in producers of lead and zinc was not far short of 40%. The shares of plantation rubber companies would no doubt have fared better than they did (a rise of 14%) but for the banditry in Malaya. Oil shares showed only a modest improvement on the year for much the same reason, namely the proximity of the important middle eastern producers to the U.S.S.R. In the light of rising commodity prices (implying higher working costs) and a fixed gold price, the setback in gold-mining shares (of about 17%) was intelligible. Moreover, talk of revaluation of the pound raised the fear of a lowering of the sterling price of gold, while the supply of gold-mining shares had to be increased because of the pressing needs of the South African section of the industry to raise further capital for developing the new goldfields in the Orange Free State and the western Rand. (A. L. W. S.)

United States. In 1950 the volume of trading on the U.S. stock market was about double that of the preceding year. A bull market continued nearly all the year with only two sharp but temporary dips in June and November, coinciding with adverse news from Korea. The market, however, was extraordinarily unresponsive to bad economic news. By Nov. 23, 1950, the industrial price average had risen to the highest level since Sept. 18, 1930; rails were at the best peak for 19 years and the general average had reached the highest level since 1933.

For 90 stocks combined, representing the railway, industrial and public utility groups, the Nov. 1950 average price level stood at 157·4, as compared with 134·0 for January, and with 131·6 and 121·9 for Dec. and Jan. 1949. Between Dec. 1949 and Nov. 1950, railway stocks (Standard and Poor's figures) increased from 41·0 to 51·8, or 26·3%. Industrial stocks during the same period increased from 162·3 to 199·7, or 23%. Public utility stocks decreased from 81·6 to 79·9, —only 1·9%—and copper stocks increased from 114·9 to 152·8, or 33·0% (*see* Table II.).

Corporate dividends, with the exception of certain limited groups such as leather and leather products, railroad and railroad equipment, and rubber and textile stocks, showed a combined increase of 21·1% in total distribution as compared with 1949.

The plethora of favourable dividends and stock split-ups, announcements of exceptional earnings, the expectation of a great expansion in armaments, a general belief in higher prices and the feeling that no unfair excess-profits tax measure would be enacted in 1950 seemed to overcome the adverse news in speculative sentiment.

On Nov. 1, 1950, the market value of all listed shares on the New York Stock exchange stood at $80,485 million with an average flat price per share of $47·01. On Nov. 1, 1949, this market value stood at $72,631 million with an average flat price per share of $43·75. An increase in the value per share of about 7·4% was thus shown for the year. According to the New York Stock exchange's compilation, stocks listed on that exchange on Nov. 1, 1950, comprised 2,221 million shares, with a total market value of $80,486 million. This value compared with $72,631 million on Nov. 1, 1949, $72,185 million on Nov. 1, 1948, $68,884 million on Nov. 1, 1947, and $66,115 million on Nov. 1, 1946. Of the 1950 total (Nov. 1) United States stocks aggregated 2,153 million shares, valued at $78,829 million, and stocks of other countries 67·99 million shares, valued at $1,656 million. The total of shares was distributed over 1,450 separate U.S. issues and 21 issues of other countries, representing a total of 1,055 issuing corporations.

Total shares traded on the exchange during 1950 amounted to 524,799,621 shares, as compared with 272,203,402 shares during 1949, 377,564,000 shares during 1945 and 1,125 million shares during 1929, the largest yearly total on record. The New York curb market had sales during 1950 of 107·81 million shares, compared with 66·13 million during 1949 and 143,337,000 shares during 1945.

The bond market was remarkably stable during 1950 at a very high price level. (*See* Table III). The slight decline in bonds after June was contrary to the rising trend in the

TABLE II. U.S. SECURITY MARKET PRICE INDICES 1926 BASE

	Railways 20 stocks		Industrial 50 stocks		Public utilities 20 stocks		Copper * 7 stocks		Stocks 90 stocks	
	1949	1950	1949	1950	1949	1950	1949	1950	1949	1950
January	43·2	43·7	151·7	165·0	68·6	83·8	128·1	120·6	121·9	134·0
February	40·2	43·8	145·2	168·4	69·3	85·2	116·7	120·8	117·3	136·6
March	39·6	44·1	146·7	169·6	70·5	86·8	111·1	116·4	118·4	137·8
April	39·5	44·4	146·1	175·2	71·8	87·1	105·7	117·1	118·3	141·7
May	38·8	44·6	144·6	182·0	72·7	88·0	103·3	127·5	117·4	146·4
June	35·8	43·5	136·2	186·1	70·3	86·8	98·9	127·8	110·9	148·8
July	36·7	45·0	144·9	172·4	72·3	78·4	107·3	128·4	117·2	138·0
August	38·3	49·1	149·8	184·0	75·6	78·6	109·1	139·8	121·4	146·4
September	38·6	51·0	151·4	191·1	77·8	79·5	105·4	143·9	123·0	151·6
October	39·5	52·1	155·6	199·9	79·1	80·7	109·6	148·4	126·2	157·8
November	39·2	51·8	158·0	199·7	79·8	79·9	113·6	152·8	127·9	157·4
December	41·0	56·02	162·3	198·4	81·6	78·24	114·9	161·8	131·6	156·8

The above figures are an average for the month based on daily closing prices, except those for copper, which are weekly closing prices. SOURCE: Standard and Poor's *Trade and Securities, Current Statistics*. * 1935-39 base.

TABLE III. U.S. BOND PRICES, 1950
Composite Bonds A1
Dollars per $100

Month	Average	Month	Average
Jan.	122·7	July	121·5
Feb.	122·7	Aug.	122·1
March	122·7	Sept.	121·7
April	122·5	Oct.	121·1
May	122·1	Nov.	121·1
June	122·0	Dec.	121·1

SOURCE: Standard and Poor's Weekly Corporate Bond Price Indices.

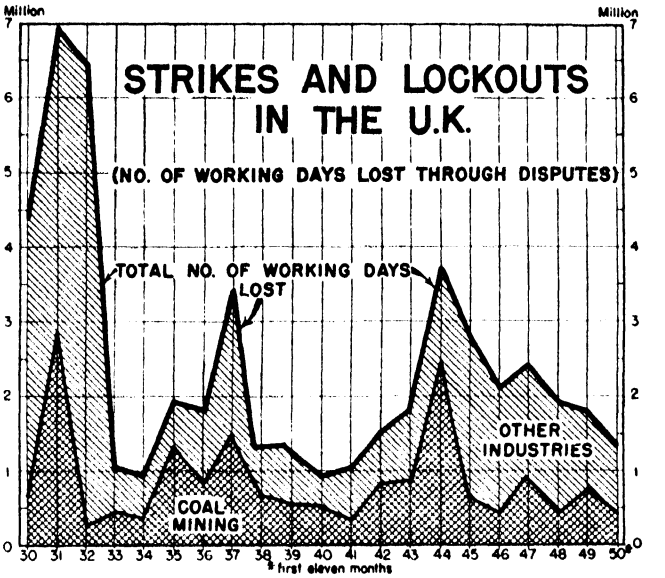
stock market. According to the New York Stock exchange's compilation, the total par value of bonds listed on that exchange at the beginning of Nov. 1950 was $117,441 million, with a market value of $118,417 million. This par value compared with $129,870 million for the corresponding period in 1949. Of the 1950 total, U.S. corporation bonds (at the beginning of November) amounted to $17,517 million par value, with a market value of $17,175 million; company bonds of other countries with a par value of $519,062,000 and a market value of $433,846,000; U.S. government bonds (inclusive of corporations and sub-divisions) with a par value of $97,816 million and a market value of $99,627 million; and other governments (inclusive of sub-divisions) with a par value of $1,338 million and a market value of $928,363,000. The total listed bonds of U.S. corporations were distributed over 919 issues with 377 issuers; of U.S. government bonds with 65 issues and 3 issuers; and other governments with 181 issues and 49 issuers. The total bonds traded on the New Year Stock exchange during 1950 amounted to $1,878·7 million, as compared with $817·9 million during 1949 and $2,262·0 million during 1945.

According to the condensed statement of income and expenditure of the New York Stock exchange for the nine months ended Sept. 30, 1950, the exchange made a profit of $769,348 compared with a net loss of $325,995 sustained in the same period of 1949. On Nov. 13 Japanese dollar bonds were restored to dealings; they had been suspended since Dec. 11, 1941. (*See* also BUSINESS REVIEW.) (S. S. H.)

STRAITS SETTLEMENTS: *see* MALAYA, FEDERATION OF; SINGAPORE.

STRIKES AND LOCK-OUTS. Western Europe experienced relatively few extensive or prolonged strikes during 1950. In both France and Italy, the countries in which the Communist party had the strongest hold over the trade union movement, there was some recession of Communist influence on the general body of the working class because of the increasing tension in international affairs. In Great Britain, although the trade unions withdrew their support of the government's wage-restraint policy and put forward substantial wage demands during the latter part of the year, there were few signs of a desire to resort to strike action in defiance of the provisions for compulsory arbitration which were still in force. The most disturbed country was Belgium, where large-scale strikes of short duration broke out, first in March 1950 and again in August, in connection with the political crisis arising out of the claim of King Leopold to resume the exercise of his royal prerogatives. There were also serious troubles in Italy early in the year in protest against the conduct of the police in suppressing industrial movements and demonstrations. In the remaining countries of western Europe industrial stoppages were few, either because the trade unions were able to secure modest concessions without them, as in the Netherlands and Scandinavia, or because no effective trade union movement existed, as in Greece and Spain.

Great Britain. In the first nine months of 1950 stoppages involving 246,000 workers caused a loss of 1,043,000 working



days, as compared with 393,000 workers and 1,606,000 days lost in the corresponding period of 1949. Coal-mining again accounted for the greatest number of days lost, 361,000 against 725,000 the previous year. Transport came next with 180,000 against 526,000 in the first nine months of 1949. The only other groups showing an aggregate of more than 50,000 days lost were vehicles (87,000) and building (59,000). Out of a total of 1,052 stoppages coal-mining accounted for 687 but they were mostly at single pits and did not last long. The principal stoppages during the year were the following: in February, engineers employed on fishing vessels at Hull; in April, London stevedores and dockers mainly in protest against the dismissal of three men who were alleged to have violated the conditions of the Dock Labour scheme; in June, porters and lorry drivers at Smithfield market, London, mainly in support of a demand for higher wages; in July, miners in Scotland in protest against the National Coal board's refusal to grant wage advances to the lower-paid pit workers; in August, London compositors in retaliation against an alleged lock-out by the master printers who were themselves retaliating against a ban on overtime and a "work to rule" system imposed by the trade unions in pursuance of a campaign for a higher minimum wage and for other concessions; in September, London omnibus and tram workers demanding higher wages and protesting against the employment of more female labour; and in October London compositors who had returned in September to allow negotiations to be resumed. Of all the major stoppages, only that of the London compositors had official trade union support: the Scottish miners' and the three London transport workers' stoppages were all called without trade union endorsement and were regarded as inspired largely by Communists though they expressed genuine grievances. The transport strikes led to a tightening of disciplinary conditions within the large Transport and General Workers' union whose leader, Arthur Deakin, had been both outspoken in his denunciation of Communism and a special target for Communist attack. Other unions in which Communism was reputedly strong had been remarkably free from strike troubles despite the existence of considerable dissatisfaction over wage questions both in the engineering industries and on the railways.

France. A 24-hr. general strike called in Nov. 1949 both by the Socialist Force Ouvrière and by the Communist-led Confédération Générale du Travail was the beginning of serious troubles over the government's refusal to concede general wage increases to meet the increased cost of living.

It was followed in February and March by further widespread strikes, mainly called by the C.G.T., in which demands for higher wages were mingled with protests against the prosecution of the war in Indo-China and attempts to stop the despatch of munitions of war to that country. Disorders occurred in connection with a number of these strikes, especially at the ports, and the C.G.T. accused the police of using them as a pretext for violent action against working-class demonstrators and trade union activists. The Communist-led unions also accused the Force Ouvrière and the Christian trade unions, which refused to take part in the strike movement, of betraying the working class. In general, however, the strike movement died away as the strikers ran out of funds and were forced back to work. There were further negotiations about wages during the following months between the government and the trade unions; and in August the government made concessions which the Force Ouvrière and the Christian unions declared themselves ready to accept under protest. The C.G.T. thereupon renewed its denunciations of the rival groups, but it was not strong enough to call for general strike action and the trouble subsided for the time being.

Italy. In Jan. 1950 serious trouble broke out in Italy after 6 men had been killed and 30 wounded by police fire in the course of a demonstration of metal workers at Modena in protest against widespread dismissals. The police alleged that they were fired on first whereas the unions maintained that the demonstrators were unarmed. The Italian General Confederation of Labour, which was under Communist leadership, called protest strikes in many parts of the country and a great demonstration was held in connection with the funeral of the dead workers. A "parliament" of Communist and Nenni Socialist deputies demanded the resignation of Mario Scelba, minister of the interior, and presented further extensive demands to the government. But the trouble gradually died down as the C.G.I.L. was not strong enough, in the face of working-class division, to prolong the strikes. Some wage concessions were made subsequently and for the rest of the year there was no extensive stoppage though agitations of landless peasants continued in the south of Italy because of the government's slowness in proceeding with the promised redistribution of land.

Belgium. From the beginning of 1950 until August Belgium was rent by the controversy over the return of King Leopold from exile. There were extensive protest strikes in March and April, especially in the Walloon areas, when it became manifest that the Catholic party was set on restoring Leopold to the throne; and similar strikes occurred on a much greater scale, amounting to a threat to bring the entire economic life of the country to a standstill, during the August crisis which ended with King Leopold's enforced relinquishment of his powers in favour of his son. In March and April the strikes had arisen partly out of economic grievances, especially a strike which in April paralysed the Antwerp docks. Belgium was suffering throughout the year from extensive unemployment and a rising cost of living; and there was much economic discontent, which was partly held in check by the political crisis.

Nigeria. The Enugu miners' strike of Nov. 1949, which led to the killing of at least 20 persons by the police, had been by far the most important recent industrial disturbance in the British colonial empire. It was followed by a committee of enquiry, whose report, issued in June 1950, censured the police commander for an "error of judgment" in firing on the strikers. The governor of the colony took exception to the censure contained in the report, and the British colonial secretary, James Griffiths, then sent an expert mission of trade unionists and employers to consider the situation on the spot. (G. D. H. C.)

United States. There were 3,606 strikes in the U.S. in 1949, an increase of almost 200 from the 1948 total of 3,419. These 3,606 strikes involved more than 3 million workers as compared with slightly fewer than 2 million for 1948, and resulted in 50·5 million idle man-days during the year, nearly 50% more than in the previous year. The first eight months of 1950 as compared with the corresponding period of 1949 indicated a greater number of strikes for the whole of 1950. For this period of 1950 there were 2,955 strikes, whereas in 1949 there were only 2,625 during the period. Fewer workers were involved in the 1950 strikes, but an increase of more than 10 million idle man-days was incurred during the period.

TABLE I. STRIKES IN THE U.S., WORKERS INVOLVED AND MAN-DAYS LOST

	Number of strikes	Workers involved	Man-days lost	% of est. work time
1935-39 (average)	2,862	1,130,000	16,900,000	·27
1946	4,985	4,600,000	116,000,000	1·43
1947	3,693	2,170,000	34,600,000	·41
1948	3,419	1,960,000	34,100,000	·37
1949	3,606	3,030,000	50,500,000	·59
1950 (8 months)	2,955	1,660,000	28,900,000	·52

SOURCE: United States Bureau of Labour Statistics, *Monthly Labor Review*.

Canada. A comparison of the first eight months of 1949 and 1950 shows the number of Canadian labour disputes remaining relatively constant. The number of employees involved and the time loss in working days, however, was less from February to July of 1950 than in the corresponding months of 1949. Only January and August showed an increase over the preceding year's figures and the August increase was primarily the result of the railway dispute which accounted for 125,700 workers being on strike.

(P. TA.)

TABLE II. NUMBER OF CANADIAN LABOUR DISPUTES * AND TIME LOST

	1950†			1949		
	No. of strikes	Employees involved	Working days lost	No. of strikes	Employees involved	Working days lost
Jan.	9	2,456	39,488	10	1,811	9,710
Feb.	15	3,764	26,300	10	7,245	71,652
March	21	5,659	25,118	11	6,601	136,317
April	20	2,585	14,640	18	7,851	138,931
May	23	3,488	23,874	23	10,532	173,925
June	27	2,781	30,152	28	11,511	141,197
July	32	6,379	50,750	20	12,592	58,005
August	19	129,787	1,053,000	20	4,574	36,276

* These figures relate only to the actual number of strikes and lock-outs in existence and the workers involved and are not a summation in each case of the monthly figures. Strikes and lock-outs are recorded together and are a cessation of work involving six or more employees and lasting at least one working day. † Preliminary.

SOURCE: *Labour Gazette* (Ottawa).

SUDAN: *see* ANGLO-EGYPTIAN SUDAN; FRENCH WEST AFRICA.

SUEZ CANAL. Traffic through the canal in 1949, as reported to the annual general meeting of the Suez Canal company on June 13, 1950, was larger than ever: 10,420 transits were made and the net tonnage of shipping was almost 69 million. The total weight of goods carried exceeded by 24% the previous maximum reached in 1948. Tanker traffic was seven times greater than in 1938. It was considered, however, that the transport of petroleum through the canal would to some extent be affected by the completion of the overland oil pipeline from Saudi Arabia to Syria which was expected to carry a flow of approximately 20 million tons a year. On the other hand tanker traffic through the canal would be further facilitated under the seventh works programme by the opening of the short by-pass canal south of Port Said, enabling such vessels to proceed in convoy with increased speed and safety. In order to lighten the cost of transits passenger dues were abolished by the company on April 15. These had been levied on the basis of a charge per head equal to that of a ton of laden vessel.

On May 1 the Egyptian government raised the state of siege decreed at the beginning of the Palestine war, except as applying to the Sinai and Red Sea areas where certain restrictions remained in force thus preventing the free use of the canal as guaranteed under the convention of 1888. Reasons of security were urged and it was pointed out that some powers had not yet signed the convention. In the speech from the throne at the opening of the Egyptian Parliament on Nov. 16 it was stated that the government considered it inevitable that the Anglo-Egyptian treaty of 1936, under the provisions of which British troops garrisoned the canal zone, should be abrogated (*see* EGYPT). Discussions followed in London in December between Mohammed Salah ed-Din, the Egyptian foreign minister, and Ernest Bevin, the British foreign secretary.

Sir Alexander Cadogan, former United Kingdom permanent representative to the United Nations, was appointed on Dec. 5 a British government director of the company in place of Lord Cromer, who resigned. (H. J. S.)

SUGAR. A concerted effort to increase beet sugar production in Europe in the 1949-50 season was successful in some countries, but only partly so in others, yields being reduced by unfavourable weather. Although the area under beet, at more than 5,250,000 ac., was nearly 500,000 ac., or over 10%, more than in 1948-49, the estimated yield of beet sugar, amounting to about 6,850,000 tons (raw value), was only slightly heavier; the output in both seasons, however, was up to the level of the years just before World War II. Crops of record size were harvested in Poland, Italy, Belgium, the Netherlands and some other countries; but these increases were offset by reduced output in Germany and France, the two largest producing countries (about 1,160,000 and 860,000 tons respectively), and in the United Kingdom (about 500,000 tons). Official estimates for the U.S.S.R. were not available, but trade reports indicated a yield of more than 2 million tons, as against 1,900,000 tons in 1948-49 and 2,400,000 tons, (including the yield of the incorporated countries) prewar.

Preliminary estimates of the 1950-51 European beet acreages showed some further expansion, and production was expected to increase appreciably except in some Balkan areas where yields were reduced by unusually dry conditions. Output was placed at 8·5 million tons, an increase of 25% over that of 1949-50. No marked increase in production was forecast for the U.S.S.R.

World cane sugar production in 1949-50 also showed some increase, the estimated total output in terms of raw sugar (including the raw value of the inferior quality *gur* of India) being slightly more than the 20,500,000 tons which it had approached in 1948-49. The small increase was due mainly to some recovery, from the low level of the previous season, in the production of Cuba. After a marked expansion since the war, expecially in 1947-48 and 1948-49, production in the far eastern territories occupied by the Japanese in World War II showed no appreciable change except in Indonesia where the crop remained relatively small. There were heavier crops in Jamaica, British Guiana, Mauritius and several other countries, but output in India, Pakistan, Australia and South Africa (the principal Commonwealth cane sugar-producing countries) was somewhat reduced. The combined production of India and Pakistan was estimated to be about 3,560,000 tons, but the bulk of it was consumed as *gur*; the quantity of white sugar produced was equivalent only to 1,200,000 tons of raw sugar. Australia produced about 940,000 tons as against 930,000 in 1948-49; South Africa 500,000 as against 540,000. The British West Indies group (including British Guiana) altogether provided about 860,000 tons and Mauritius a further 410,000 tons.

On the basis of preliminary estimates, the total output of cane sugar in Commonwealth countries in the 1950-51 season was 6,670,000 tons, an increase of about 200,000 over the previous season's total. There was some increase in nearly all areas.

The international trade in raw sugar in the "quota" year 1949-50 (September-August) was again confined mainly to cane sugar. Imports into the United Kingdom showed a further expansion, at 2,285,000 tons as against 1,910,000 in 1948-49 and 1,775,000 in the preceding year. Imports from Australia, the British West Indies, Mauritius and South Africa were heavier, but there were reduced shipments from British Guiana and no supplies from Fiji. The largest increase, however, was in the consignments from Cuba which, at 910,000 tons, were nearly as heavy as in 1947-48. Imports from the Dominican republic were also at a high level.

After prolonged discussion, the British West Indies Sugar association accepted the British government's offer to purchase, at an agreed price, 670,000 tons of sugar annually during the years 1953 to 1957 inclusive. The British West Indies and British Guiana thus obtained an outlet on these terms for 30,000 tons more than had been proposed originally. New Zealand also undertook to buy 75,000 tons annually during 1953-57 from the British Ministry of Food. This long-term agreement on the part of New Zealand, the first of its kind, enabled the ministry to increase the allocations to Commonwealth producers, at agreed prices, from 1,568,000 tons to 1,643,000. The new five-year contract was to come into operation on the expiry of the arrangement under which the United Kingdom undertook to find a market until the end of 1952 for all Commonwealth sugar exports. (D. G. B.)

United States. Total sugar production in the U.S. proper in 1950 was estimated at about 2,475,000 tons, as compared with 2,084,000 tons in 1949. The preliminary estimate for 1950 included 1·95 million tons of refined beet sugar, a 25% increase over 1949, and 525,000 tons of cane sugar. The 1950 U.S. crop included 13,383,000 tons of sugar beet, as compared with 10,197,000 tons in 1949; the 1950 crop was much greater than the 1939-48 average. The acreage harvested was 936,000, as compared with 687,000 in 1949 and 773,000 average in 1939-48. The weather early in the season was generally unfavourable, but yields were 14·3 tons per acre, compared with 14·8 tons in 1949 and the 12·8-ton average of 1939-48.

The 1950 sugar cane crop of 6·62 million tons, mostly from Louisiana, to be used for sugar making, was well above the average for the decade (5,467,000 tons) and the 1949 crop of 6,121,000 tons. Yields were high at 21·0 tons per ac., as compared with an average for the decade of 19·8. The crop of sugar cane for syrup in several southern states was smaller in 1950, principally because acreage was cut to 62,000 (70,000 in 1949). Production was 10·83 million gal., as compared with 11·92 million gal. in 1949.

Other minor U.S. sources of sugar, such as honey and maple sugar products, were produced in amounts about 5% larger than those of 1949. Sorgo syrup production was 6,383,000 gal., as compared with 6,012,000 gal. in 1949, the smallest output on record. The maple products of the northeast amounted to 1,968,000 gal. of syrup and 262,000 lb. of sugar, as compared with 1,614,000 gal. of syrup and 292,000 lb. of sugar in 1949. The 1950 honey crop was estimated at 234,153,000 lb., 3% more than in 1949 and the largest since 1939.

Civilian consumption of refined sugar in 1950, including abnormal reserves accumulated during the "war-scare" buying in the summer, was estimated as 1·000 lb. per person, as compared with 95·6 lb. in 1949 and an average of 97·0 lb. during the years 1935-39. (J. K. R.)

SUMATRA: *see* INDONESIA.

SUMMERSKILL, EDITH CLARA (MRS. E. JEFFREY SAMUEL), British physician and politician (b. London, April 19, 1901), was educated at King's college, London, and at Charing Cross Hospital Medical school. She entered politics through local government and after contesting Putney, London, and Bury, Lancashire, unsuccessfully in 1934 and 1935, was elected Labour M.P. for West Fulham, London, in 1938. In 1944 she was elected to the Labour party national executive and at the general election in the following year was again returned for West Fulham and was appointed parliamentary secretary to the Ministry of Food. In 1949 she was sworn of the Privy Council. Elected for West Fulham for the third time at the 1950 general election, she was appointed minister of national insurance in the re-formed Labour government, being the third woman to become a minister of cabinet rank. In April she visited the Newcastle-upon-Tyne branch of her ministry and on May 24 opened the Schoolgirls' exhibition at the Horticultural hall, London. In July she provoked a lively controversy in the House of Commons and in the country by a speech to a south London audience in which she deplored the teaching of boxing in schools. A vice president of the Socialist Medical association, she was always keenly interested in the welfare of women and children, and published *Women Fall In* and *Babies without Tears* in 1941. Her many visits abroad included those to Russia in 1931, Spain during the civil war, the United States and Australasia.

SURGERY. Great progress was made in cardiac surgery during 1950. Charles Baker, R. C. Brock and Maurice Campbell of London reported nine cases of operation on the mitral valve, of which seven were successful, transforming cardiac cripples into useful citizens; and D. E. Harken and his colleagues in Boston and Charles P. Bailey's group in Philadelphia separately concluded that mitral valvulotomy was practicable and efficacious. All preferred to approach the valve through the auricular appendage, whence the commissures of the valves were either fractured with the finger or divided with a knife. Bailey *et al.* claimed 11 successes out of 22 cases. Brock considered valvulotomy justifiable and helpful and to be recommended in suitable cases before they had deteriorated too far. E. F. Bland and R. H. Sweet introduced a venous shunt operation for mitral stenosis, whereby the azygos vein was anastomosed to a branch of the inferior pulmonary vein to relieve pressure in the pulmonary circulation: F. d'Allaines *et al.* reported one case in which they had done this with good result.

Further experience was obtained in treating cases of pulmonary stenosis. A. Blalack in Baltimore still used chiefly his anastomosis between the subclavian and pulmonary arteries, while Brock continued to prefer to attack the pulmonary valve or stenosed infundibulum where possible.

In the field of thoracic surgery attention was turned to reconstruction of the trachea and bronchi, as it was found that end-to-end suture is impossible after resection of more than two centimetres. O. T. Clagett in America used polythene tubing in dogs, but the patient in whom he put it died a week later. In 1949, C. G. Rob of London had successfully employed a tantalum gauze tube made watertight with fascia inside and out; and R. Belsey had used fascia lata supported by a spiral of stainless steel wire. Rob also used his tantalum gauze tube to replace sections of oesophagus: in this situation fascia lata was applied only to the outside of the tube; the gauze and fascia were removed or extruded after three or four weeks. New epithelium was found to grow only on the inside of the tantalum gauze tube but on the outside of the polythene. It was essential to preserve one superior laryngeal and one recurrent nerve. Paul W. Gebauer in the U.S. described four cases in which bronchi affected by tuberculous bronchostenosis were reconstructed with grafts from the dermal layer of the skin supported by stainless steel wire loops; clinically this procedure gave good results.

There was continued development in the maintenance of the *milieu intérieur* with parenteral nourishment. Particular attention was paid to the potassium ion; and it was found that patients losing fluid from the upper intestinal tract soon became short of potassium. This deficiency manifested itself by extreme muscle weakness, paralysis of accessory respiratory muscles, aphonia and coma, together with an alteration in the electrocardiogram. If alkalosis persists after vomiting or diarrhoea in spite of adequate hydration and administration of sodium chloride, potassium deficiency should be suspected. It was advised that gastric and intestinal drainage should be restricted to the shortest possible time and that sodium and potassium should be replaced daily, with care to maintain an adequate urinary output. Several papers on this subject were published, mainly from the U.S. Intravenous alcohol was advocated by some authorities: it was found to help to maintain a positive nitrogen balance and acted as a post-operative sedative and analgesic and a source of calories; optimum dosage was found to be 15 c.c. of 98%.

G. de Takets reported from the U.S. on seven patients who underwent splanchnicectomy for pain of pancreatic origin: two who were suffering from inoperable carcinoma only obtained temporary relief but in five cases where pain was due to chronic calcareous pancreatitis the patients were rendered pain-free and gained weight. The operation advised consisted in section of the splanchnic nerves and excision of the 9th-12th sympathetic ganglia by a retropleural supradiaphragmatic approach. John E. Connolly *et al.* reported two similar successful cases.

There was further extension of the field of cancer surgery during 1950. Joe V. Meigs reported a 25% mortality for radical operations for carcinoma of the cervix, while Alexander Brunschwig in New York continued to perform pelvic evisceration successfully. E. M. Bricker formed a new bladder, using the caecum and ascending colon after resection of the pelvic viscera. In one case a catheter was worn in the colostomy tract and drained periodically; in the second case a Rutzen bag was worn over an ileostomy. Several papers were published on hemipelvectomy and interscapulo-thoracic disarticulation for cancer: Bradley L. Coley perfomed nine hemipelvectomies with an operative death and two patients returned to work. Frank H. Lahey advocated total gastrectomies for carcinoma and referred to a series of 133 total gastrectomies with a mortality nearly the same as that of partial gastrectomy and a three-year survival rate of 21%.

A greater number of antibiotics in larger quantities were available in 1950. Bacitracin was found to be of great service in the treatment of progressive synergistic gangrene: G. Gavin Miller cured five cases which had failed to respond to other forms of treatment, four of them being resistant to penicillin. The increased production of streptomycin made the surgical treatment of pulmonary tuberculosis safer, and many more resections of part or all of the affected lungs were carried out. O. F. Thomas reported on 200 resections performed in the thoracic surgical service in Liverpool in the years 1948-50 with a 2·5% mortality. Resection was advised for tuberculoma, secondary bronchiectasis, unilateral cavernous disease and after thoracoplasty when the disease had not been controlled. Tuberculosis empyemata were treated by pleuro-pneumonectomy using a streptomycin cover. It was found better to excise diseased lung than to collapse it, provided the resection was not likely to cause too great a

reduction of lung function. Selman A. Wakeman of New Brunswick reported on a new antibiotic neomycin: this was found to be more active than streptomycin against *M. tuberculosis;* active against streptomycin-resistant strains; less likely to lead to the development of resistant strains; and of low toxicity and high therapeutic value.

Radio-active isotopes were used increasingly in 1950 both as a method of research and in therapy. When elements were tagged by a radio-active isotope, their course through the body could be followed. As an aid to the diagnosis of thyrotoxicosis it was found that in this condition plasma is cleared of radio-active iodine at four times the normal rate. Some cases of thyroid carcinoma were found to concentrate I_{131} and so could be irradiated from within. E. E. Pochin and H. C. Warrington each published two cases illustrating the treatment of thyroid carcinoma with radio-iodine. A preliminary communication was made by D. M. Wallace *et al.* on intracavitary irradiation of bladder mucosa by radio-active sodium. Ten cases were treated, eight of which were proved carcinoma, and all showed evidence of regression. (*See* also ANAESTHESIOLOGY.) (W. H. OE.)

SURINAM: *see* NETHERLANDS OVERSEAS TERRITORIES.

SWAZILAND: *see* BRITISH SOUTH AFRICAN PROTECTORATES.

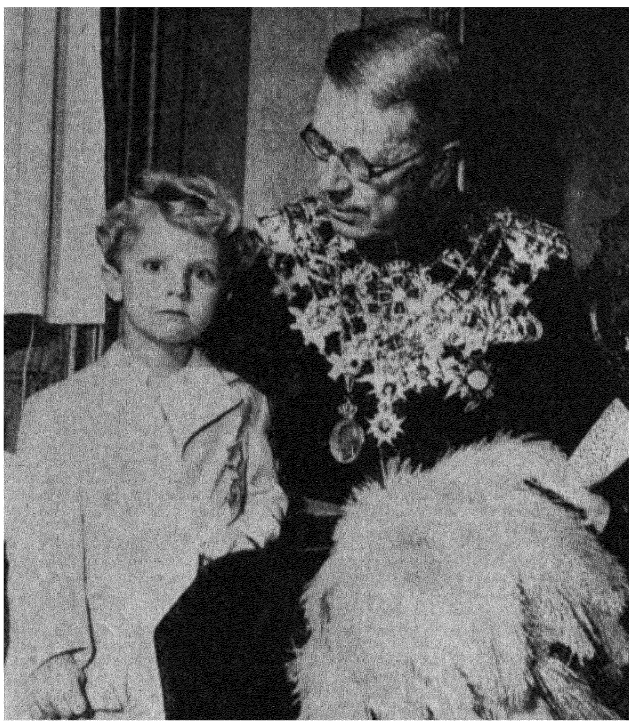
SWEDEN. Constitutional monarchy of northern Europe, lying on the eastern side of the Scandinavian peninsula, bounded N.E. by Finland, E. and S. by the Baltic sea, S.W. by the straits of Öresund and of Kattegat and W. and N.W. by Norway. Area: 173,390 sq.mi. Pop.: (1945 census) 6,673,749; (Dec. 1949 est.) 6,986,181. Language: Swedish, with some Finnish (1930: 33,929) and Lappish (1945: about 4,410) in the north. Religion: predominantly Lutheran; there were, however, (1930 census) 119,361 Protestant dissenters of various denominations, 4,818 Roman Catholics and 6,653 Jews. Chief towns (pop., 1949 est.): Stockholm (cap., 733,615); Gothenburg or Göteborg (349,145); Malmö (189,232); Norrköping (84,035); Hälsingborg (71,151). Ruler, King Gustaf VI Adolf (*q.v.*), prime minister, Tage Fritiof Erlander.

History. The quiet course of Sweden's external and internal affairs in 1950 was only slightly deflected by the Korean war and a local election campaign, but on Oct. 29 a grateful people paused to mourn their beloved king. Respected as "his advisers' adviser," Gustaf V (*see* OBITUARIES), an aloof and discreet constitutional monarch, had taken courageous initiatives to improve defence (1911-1914) and Nordic unity (1917) and shared in shaping that policy of firmness, with moderation, which had steered the ship of state through the threats and dangers of two world wars, and his death led the nation to review nostalgically the past decades. Some 100,000 subjects gathered along the route of the funeral procession (Nov. 9).

King Gustaf VI Adolf received the oath of allegiance from his troops at a parade of the Stockholm garrison (Nov. 6), surrounded by tens of thousands of citizens undeterred by the snow, rain, wind and cold, and reminded them of the gravity of the times:

> Sweden's military forces and other measures for security exist in order to defend our country, its freedom and its independence to the utmost should the need arise. By their very existence they will contribute towards keeping war away from Swedish territory. The more efficient the defence, the greater the likelihood that it need never be brought into action.

Although Sweden's unique position on the fringe of the Atlantic group of European nations underwent no spectacular change in 1950, the government kept pace with the United Nations' quickened tempo and thus found itself several steps farther from "neutrality" in fact, if not in principle, at the year's close. Detachment from all military blocs was reaffirmed in parliament by Östen Undén, the foreign minister, on March 22. The invasion of South Korea shook complacency, however, and Sweden soon joined the nations supporting the resolution in favour of aid to the victim which the Security council had adopted. Tage Erlander, the prime minister, condemned the attack by North Korea as "an act of aggression liable to endanger world peace" (July 2), and when parliament reassembled his statement was approved by all parties except the Communist. The Swedish Red Cross promptly organized a field hospital, their 12th to go abroad but the first to receive state support. Dr. Carl Erik Groth of the Swedish Medical board chose a staff of 200 men and women from among many volunteers and the unit landed at Pusan in September.



King Gustaf VI Adolf who succeeded his father as King of Sweden on Oct. 30, 1950, with his heir, his grandson Prince Carl Gustaf, aged four.

The prime minister still disclaimed interest in the Atlantic pact (Aug. 3) and the foreign minister made it clear that if a great power war developed from the Korean conflict, Sweden continued to envisage its role as one of armed neutrality. No offer to send troops to Korea was indeed ever mentioned by the government and reference has been made to a Swedish law stipulating that conscripts might not be sent outside the country except for Sweden's own defence.

Co-operation with Scandinavian neighbours brought modest results in certain fields and disappointment in others; military problems were in any case excluded since the rift in 1949. The preliminary report of a joint committee (Jan. 18) declared that a Scandinavian customs union was not yet practicable and recommended a transition period of ten years, but the foreign ministers' meeting that adopted it determined to explore the possibility of a Scandinavian trade market (March 11). As a result of discussions concluded in January, representatives of the British, Danish, Norwegian and Swedish governments agreed in Paris to give effect to the financial aspect of recommendations for closer economic co-operation drawn up by their experts in accordance with the objectives of the O.E.E.C. The foreign ministers of Denmark, Norway and Sweden conferred privately at Halmstad on Feb. 13, and at the March 11 meeting it was



King Gustaf VI Adolf (centre) with his cabinet in the royal palace, Stockholm, on Oct. 30, 1950. On his right is Prince Bertil and on his left, Prince Wilhelm.

arranged that Sweden and Denmark should consult about the Soviet seizure of their fishing vessels in the Baltic. The four Scandinavian foreign ministers discussed the U.N. assembly agenda in Reykjavik (Aug. 30-Sept. 1), deciding to support the Netherlands' succession to Norway on the Security council and Sweden's to Denmark on the Economic and Social council.

It was announced on Jan. 14 that Sweden would recognize the Chinese Communist government, and soon after the appointment of an ambassador (May 9) the Chinese foreign minister, Chou En-lai, attended the Peking embassy's reception on the king's birthday (June 16), his only previous reported appearance having been at a Soviet function. The new Chinese ambassador, General Ken Piao, reached Stockholm early in September and Sweden voted for India's resolution in favour of Chinese Communist representation in the U.N. on Sept. 20.

In March the state prosecutor accused the Israeli authorities of "astonishing negligence" in police work following the murder of Count Folke Bernadotte. An Israeli memorandum admitted (June 19) "gaps and omissions" caused by the abnormal conditions then prevailing; a delegate sent to Stockholm to express deep regret assured the Swedish government that it was still hoped that the guilty men would be brought to judgment. Sweden accorded Israel *de jure* recognition on July 5. A street in Rome was named after Count Bernadotte on the second anniversary of his death (Sept. 17).

A series of incidents tended to strain Swedish relations with eastern Europe. Holger Hjelm, the Swedish business man condemned in Prague to three years' hard labour and confiscation of property for an alleged attempt to help Czechs leave their country illegally and to smuggle out factory equipment, was able to inform the Swedish minister of his maltreatment in prison, and after several strong protests by the Swedish government he was freed (Jan. 18). A few months after the suspension of the trade and payments agreement with Hungary in retaliation for the nationalization of Swedish firms, objection was taken to propaganda carried on among Hungarians working in Sweden. The Polish police detained Swedish seamen and others for varying periods and it was said to be difficult to sign on crews for ships sailing to Poland, a vital source of coal. On May 6 Sweden lodged a protest, the ninth in 18 months, against Soviet interference with Swedish fishing-craft in the Baltic, described as "a flagrant violation of international law": in February two boats were, for instance, seized 16½ mi. and 21 mi. respectively from the Soviet Baltic coast and taken to a Soviet port. The Soviet reply (June 6) rejected the demands for damages and maintained that the boats were captured within 12 mi. of the coast, a territorial limit "established in 1927." On July 25 Sweden and Denmark made *démarches* in Moscow, referring to the three or, occasionally, four miles accepted for centuries as the limit of territorial waters for European states and declaring that any extension constituted encroachment on the freedom of the seas. The Soviet Union nevertheless reasserted its claim to a 12-mile limit (Aug. 31).

Meanwhile the Soviet naval attaché, assistant naval attaché and two other embassy officials sailed through a prohibited channel in Swedish waters and were seen taking photographs which they declined to show. Soon after the naval attaché's "official rebuke" by the Swedish foreign ministry (Aug. 21), the U.S.S.R. accused the Swedish authorities (Aug. 30) of illegally imprisoning a Soviet citizen called W. Vilkans, a Latvian, and allowing "representatives of fascist *émigré* organizations to take part in illegal activities against the U.S.S.R. from Swedish soil" — presumably a reference to some 30,000 Baltic refugees still in Sweden. The Swedish government rejected these charges (Aug. 31) and on Sept. 17 requested the recall of two members of the same embassy found in a strictly forbidden military area near Stockholm during manoeuvres. The ambassador, Admiral Rodionov, said the men were drivers out early "to pick mushrooms before beginning work" and unable to understand the four-language placards on the road, but the request for their recall was repeated. In December Eastern German trawlers claiming that the weather had driven them into various harbours on the Swedish side of the Kattegat coast aroused considerable suspicion, deepened by reports of a growing navy, of 800 well-trained marines among the people's police at the Berlin Communist congress (July), as well as special courses in the Swedish language and Swedish affairs organized for them in Eastern Germany. Just before Christmas a number of Estonians in Sweden received mysterious telephone calls advising them to repatriate themselves promptly, as "in a few months we will occupy Sweden and then all the refugees who did not voluntarily return will fare badly."

In the local election campaign which opened in August, the

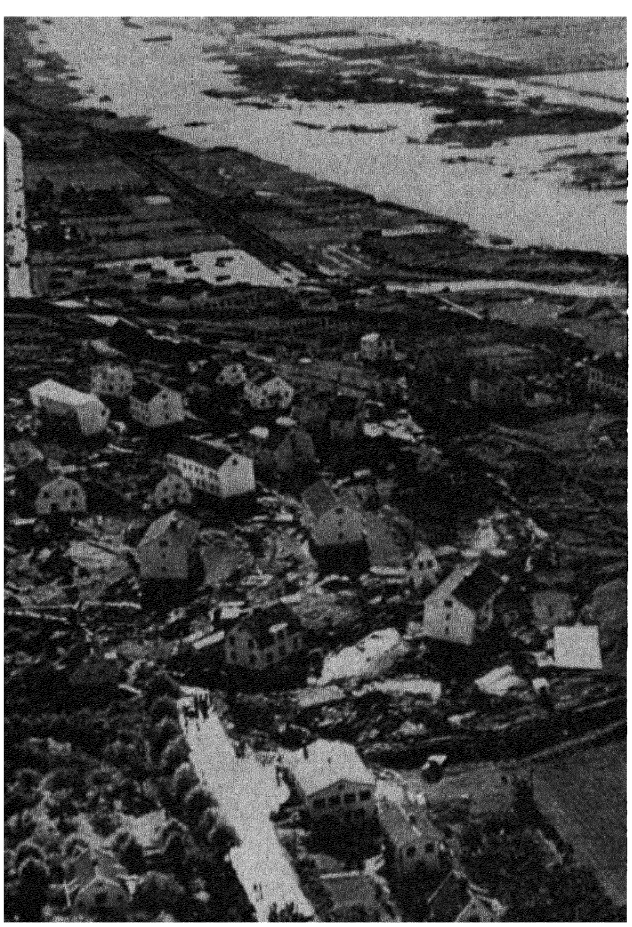
discussion of foreign affairs played, significantly, a much larger part than in the last general election (1948), although divergences between parties related to emphasis rather than fundamental policy. According to a pre-election Gallup poll, 18% of the public favoured joining the North Atlantic treaty, but 49% were against any change and the ruling Social Democrats shrewdly took the popular concept of remaining "alliance-free" as the main plank in their platform. In this they were followed, as usual, by the Agrarians, whereas Liberals and Conservatives urged immediate military talks with Norway and faster progress with defence. Orders for material costing Kr. 800 million, placed a week after the outbreak of the Korean war, had failed to dispel general anxiety on this score and an open letter from the Conservative leader, Jarl Hjalmarson, to the prime minister led to conversations with opposition leaders (excluding only the Communists) and joint recommendations (Sept. 14) for submission to parliament. These fell far short of what the military had listed as urgent needs, especially with respect to training, the first period of military service remaining at nine months instead of the stipulated eleven; but the proposals included Kr. 71 million for more war material and airfields, Kr. 45 million for civil defence, medical services and sharpened precautions against espionage and sabotage, and Kr. 50 million for stock-piling and other economic preparations.

Internal election issues were familiar: the government stressed the social achievements of the welfare state and success in guiding postwar adjustments, while opposition parties contended that economies could and should be made and appealed for lower taxes and fewer controls. The spokesmen of the four democratic parties warned the voters constantly against Communist infiltration and the "Stockholm peace appeal" was denounced both by Erlander (July 16) as a shocking misuse of the name of the capital, resented by the Swedes, and by Undén (Sept. 10) as a trap for peace-loving people who, through preoccupation with the atomic bomb, ignored the central problem, which was aggression.

About 78% of the electorate voted, a record for county and municipal elections. The Social Democrats obtained 49% of all votes cast (1946: 44%), the Liberals (22%) sharing their victory at the expense of the Conservatives and Agrarians (each 12%) and especially of the Communists (5%; 1946: 11%). Communist mandates were reduced from 138 to 28 and Communists would, in consequence, no longer function, for instance, as departmental chiefs on the Stockholm council.

In November a new Anglo-Swedish monetary agreement was signed, conforming with the provisions of the European Payments union, and under a new trade agreement (Dec. 15) United Kingdom imports of Swedish timber, pulp, paper, iron ore and other raw materials were expected to reach a value of £65-£70 million in 1951 (with Swedish imports raised to £75 million), as compared with 1950 U.K. imports totalling less than £60 million. The reduction from 2 million to 500,000 tons of coal promised by Britain was however a severe blow, with U.S. coal dear and any increase above the 3 million tons due from Poland before Nov. 1, 1951, involving the export of more cellulose and paper, in demand elsewhere.

Consumer goods were abundant in 1950, but there was a Christmas shock for household budgets in the decision to cancel subsidies on ham and other pig products and to increase the tax on the national drink, *snaps*.



The village of Surte, near Gothenburg, Sweden, after a landslide had carried the village into the river valley below in Sept. 1950.

Education. Schools (1949): elementary 26,045 (1945); pupils 589,775, teachers 28,382; secondary 219, pupils 82,862, teachers 4,818 (1948); technical and teachers' training colleges 58, pupils 11,912, teachers 1,645 (1948). Universities 6 and institutions of higher education 11, students 15,650, professors and lecturers 1,423. Illiteracy: nil.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 698 (676); barley 178 (210); oats 840 (806); rye 277 (306); potatoes 1,720 (1,645). Livestock (June 1950, '000 head): cattle 2,655; sheep 282; pigs 1,265; horses 440; poultry 12,000. Fisheries: total catch (1949): weight 179,000 metric tons; value Kr. 103 million.

Industry. Industrial establishments (1948) 17,490; persons employed 806,000. Fuel and power: coal consumption ('000 metric tons, 1948; 1949 in brackets) 10,056 (8,706); electricity (million kwh., 1948; 1949 in brackets) 14,269 (16,104). Raw materials ('000 metric tons, 1948; 1949 in brackets): iron ore 13,287 (13,748); pig iron 766 (811); steel ingots and castings 1,260 (1,368). Manufactured goods ('000 metric tons; 1948; 1949 in brackets): wood pulp 3,001 (2,886); paper 1,057 (1,072); cement 1,489 (1,698).

Foreign trade. (Million kronor, 1949; 1950, six months in brackets) import 4,334 (2,733); export 4,250 (2,534). In weight imports amounted in 1949 to 13,634,000 and exports to 19,796,000 metric tons.

Transport and Communications. Roads (1950): 90,409 km. Licensed motor vehicles (Jan. 1950): cars and buses 201,468, lorries 79,503. Railways (1949): 16,657 km.; passenger traffic (1949) 6,336 million pass.-km.; goods traffic (1949) 7,536 million ton-km. Shipping (Jan. 1950): number of merchant vessels 2,199; total tonnage 2,080,000 gross tons. Air transport (1949): km. flown 8,849,000; passengers flown 145,845; cargo carried (metric tons): luggage 3,705, freight 2,725, mail 978. Telephone subscribers (1950): 1,591,473. Wireless licences (1950): 2,095,474.

Finance and Banking. (Million kronor). Budget: (1949-50 actual) revenue 5,074, expenditure 4,652; (1950-51 est.) revenue 4,998, expenditure 4,839. National debt (Jan. 1950): 12,055. Currency circulation (Sept. 1950): 3,197. Gold reserve (Sept. 1950): 448. Savings and bank deposits (Sept. 1950): 18,344. Monetary unit: *krona* (pl. *kronor*) with an exchange rate (Oct. 1950) of Kr. 14·49 to the pound and Kr. 5·18 to the U.S. $.

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Some of the 24 entrants in the "Daily Mail" international cross-channel swimming race seen entering the water at Cap Griz Nez, France, on Aug. 22, 1950. Nine of them completed the crossing to England.

SWIMMING. In the Empire Games at Auckland in February Edna Child (England) won both the women's highboard and springboard diving; Peter Heatly (Scotland) the men's highboard; Helen O. Gordon (Scotland) the 220 yd. breaststroke (in 3 min. 1·7 sec., a record for the Empire Games); and England (J. Hale, P. H. Kendall and R. Romain) the men's medley relay (in 3 min. 26·6 sec., also a record). Margaret Wellington (England), second in the 110 yd. and the 440 yd., broke previous records.

At an international contest between England and France two swimming events were won by each country and the water polo match ended in a draw, 5 all.

At Oberhausen in September, Great Britain defeated Germany in a full Olympic programme by 97 points to 94. Two British swimmers returned times faster than those of the new European championships (Vienna, August), namely, Margaret McDowall (Scotland), 100 m. backstroke 1 min. 16·3 sec.; and W. J. Brockway (Wales), 100 m. men's backstroke 1 min. 8·5 sec.

England's centralized national championships meeting at Lancaster, Scotland's at Kilmarnock and Wales's at Barry were outstandingly successful. At Lancaster English swimmers won seven titles, Scottish swimmers six, and Welsh swimmers three. Scotland won, for the first time, the inter-country speed swimming contest, instituted in 1929, with 30 points against England's 26 and Wales's 16.

The new international water polo rules which came into force in January greatly improved the game In international matches England beat Scotland 10—0 and Ireland 19—3; Scotland beat Wales 9—3. (B. W. C.)

United States swimmers won 9 of 12 events at an international meeting in Tokyo in 1950. Fourteen men's and three women's world records were approved and registered. John B. Marshall, a young Australian student at Yale university, beat eight free-style records: the 200 m. in 2 min. 4·6 sec.; the 220 yd. in 2 min. 5·5 sec.; the 400 m. in 4 min. 29·5 sec.; the 440 yd. in 4 min. 31·2 sec.; the 500 yd. in 5 min. 12·0 sec.; the 500 m. in 5 min. 54·3 sec.; the 880 yd. in 9 min. 37·5 sec.; and the mile in 19 min. 49·4 sec. Hironoshin Furuhashi of Japan beat the 800 m. record in 9 min. 35·5 sec.

Leonid Meshkov, of the U.S.S.R., lowered the record for the 100 m. to 1 min. 6·8 sec., and Robert Brawner and Joseph Verdeur, U S., reduced those for the 200 yd. and the 200 m. to 2 min. 13·1 sec. and 2 min. 28·3 sec.

Gretjen Wielema of the Netherlands reduced the women's backstroke records for the 100 yd. to 1 min. 4·6 sec. and the 200 m. to 2 min. 35·3 sec., and Giselle Vallerey of France that for the 100 m. breaststroke to 1 min. 17·4 sec. (L. de B. H.)

Channel Swimming. On Aug. 22 the first international cross-channel swimming race was held. Organized by the *Daily Mail* (London) prizes of £1,000 were awarded to the first man and the first woman ashore and £250 to each swimmer who completed the course. Twenty-four competitors (18 men and 6 women) started from Cap Griz Nez, and nine reached Dover. Hassan Abd el-Rehim (Egypt) was first in 10 hr. 50 min. and Roger Le Morvan (France) second in 11 hr. 3 min.; both these swimmers broke the record of 11 hr. 5 min. set up in 1927 by Georges Michel. The fastest woman was Eileen Fenton (Great Britain) in 15 hr. 31 min. The other finishers were: Mareeh Hassan Hamad (Egypt), 12 hr. 5 min.; Sam Rockett (Great Britain), 14 hr. 17 min.; William Barnie (Great Britain), 14 hr. 45 min.; Jason Zirganos (Greece), 16 hr. 17 min.; Antonio Abertondo (Argentina), 16 hr. 18 min.; and Jenny Kammersgaard (Denmark), 16 hr. 27 min.

The only other successful cross-channel swimmer in 1950 was Florence Chadwick (United States), who set up a new record for women by crossing in 13 hr. 23 min. (*See* also EMPIRE GAMES.)

SWITZERLAND. Republican confederation of 22 cantons in west-central Europe, bounded W. by France, N. by Germany, E. by Austria and Liechtenstein and S. by Italy. Area: 15,944 sq.mi Pop.: (1941 census) 4,265,703;

(mid-1949 est.) 4,645,000. Language: German 72·6%; French 20·8%; Italian 5·2%; Romansch 1·1%. Religion: Protestant 57·6%; Roman Catholic 41·1%; Jewish 0·5%. Chief towns (pop., 1946 est.): Berne (cap., 136,700); Zürich (360,500); Basle (170,300); Geneva (137,600); Lausanne (99,300). President of the confederation for 1950, Dr. Max Petitpierre; vice president of the federal council (government), Eduard von Steiger (*q.v.*).

History. During 1950 two major preoccupations absorbed the attention of the Swiss, that of regularizing their fiscal system on the one hand and that of building up their military strength to an unprecedented level on the other.

Federal Taxation. On Dec. 21, 1949 a provisional financial programme based upon direct federal taxation had been voted to tide things over for another two years. Early in 1950, however, it was agreed to drop this plan after one year only, and thanks to strong federalist pressure, especially from the canton of Vaud, a commission of both chambers decided in favour of a sharp change in financial policy. In the place of the direct federal taxes which, although introduced as emergency measures, had now been levied for years, it was proposed that Fr. 70 million a year should in future be provided by the cantons to the *Bund* or confederation and that direct taxes should be levied by the confederation only upon corporations. By this plan, the cantons would become responsible for the way in which their respective quotas should be raised; it had been put forward with growing persistence by the *Gazette de Lausanne* during 1949, although its opponents had pointed out that it would not greatly ease existing difficulties and was likely to create new ones as well. On March 21, 1950, the two houses of the legislature accepted the government motion in favour of putting this proposal to the people to be voted upon in a referendum on June 4.

During April and May the Social Democratic party, the trade unions and co-operatives and also Gottlieb Duttweiler's independent party (Landesring) campaigned against the cantonal quota plan. A good deal of anxiety was felt as to how the referendum would result; the small, remote cantons, as well as the French-speaking ones, seemed in favour of the new financial project, and this created the possibility of a majority of the cantons voting one way and a majority of the people the other, a form of rejection which would leave bitterness behind it. The result was, however, perfectly clear-cut: 486,506 persons and 16 cantons voted against and 267,540 persons and 6 cantons in favour; among the French-speaking cantons, Neuchâtel was found to have deserted to the majority, and even in Vaud the ayes were only 28,113 to 25,179 noes. For some time a popular tendency to vote against things had been evident; in this case, however, the project was deplored by many experts and the result of the referendum was welcomed by them—it was unfortunate mainly in leaving the federal government with no revenue in prospect after Dec. 21, except for customs duties.

In July, therefore, the government proposed a return to the provisional programme of Dec. 21, 1949, with certain modifications, to which the chambers added during their autumn sessions. Virtually all foods were to be freed of the sales tax and more low incomes were to escape the so-called *Wehrsteuer*, which was in fact a form of income tax; further, Fr. 400 million were to be put aside for social relief in emergencies. The last point insured Social Democratic support, and it was decided that this revised but by now familiar plan, to function to the end of 1954, should be offered for popular approval in a referendum on Dec. 3. In view of the increasingly serious international situation the government urged acceptance with unusual emphasis and 516,757 people voted in favour and 227,329 against: majorities in all cantons except Vaud and Geneva voted "yes."

Reorganization of the Armed Forces. Until the beginning of 1950 the Swiss high command had by no means applied the lessons of World War II to the organization of the Swiss armed forces; during the year, however, it succeeded in convincing the government and the public that it was the highest time that this should be done. The much more specialized training of fewer recruits was decided upon, together with rearmament at a steep rate involving complete motorization and an unprecedented extension of the air force. In October Fr. 1,400 million over five years were voted for these purposes.

Rearmament at home and abroad shaped Switzerland's economic history during the year. In the spring, in view of the ever more strained international situation, the government appealed to the public to lay in domestic supplies. At first the response was relatively slight as prices were still felt to be excessively high, but after the outbreak of war in Korea buying increased and prices rose further. The rise in prices became part of a fresh Swiss boom created by the rearmament of the whole western world: the Swiss metallurgical and machine industries received any number of orders, and the prospects of the Swiss watchmakers, who lived in a state of permanent defeatism, also brightened considerably by the second half of the year. The first signs of unemployment which had appeared in 1949 were obliterated and foreign labour was recalled.

A striking increase in foreign trade was noticeable by August and continued in September and October: while the United States remained Switzerland's most important trade partner, the sharp increase of trade with Western Germany was regarded with satisfaction since Switzerland had had a lively exchange of goods with Germany until 1939 and had felt the lack of it after 1945.

The boom in the second half of 1950 thus had conflicting consequences. On the one hand the increase in foreign trade increased the revenue from customs and thereby eased the federal budget situation. On the other for many people the cost of living became more oppressively high. Prices of milk, sugar and coffee immediately rose, and for most people the worst blow, though only prospective, was the long-delayed decision partially to decontrol rents in 1951. After lengthy negotiations the salaries of all grades of civil servants were raised before the end of the year.

In foreign policy the Swiss government tried to insist upon the principle of neutrality as severely as ever, but was nevertheless drawn into solidarity with the west. In August it recognized Western Germany. On Sept. 19, in Paris, Switzerland adhered to the European Payments union and this was ratified at an extraordinary session of the National Assembly (the two chambers combined) on Oct. 26.

On Sept. 14 Joseph Escher, former president of the Catholic Conservative party, was elected unanimously to succeed Enrico Celio (who had resigned in order to become Swiss minister to Rome) as the seventh federal councillor or minister. This meant that the Italian-Swiss were not represented in the federal council for the first time since 1912, the council consisting of five German-speaking and two French-speaking members. On Dec. 14 Eduard von Steiger was elected president of the confederation for 1951 and Karl Kobelt vice president of the federal council. (E. Wi.)

Education. Schools (1947-48): elementary, pupils 430,720, teachers 13,932; secondary, pupils 75,510, teachers 3,131; universities (1948-49) 7, students 13,195, professors and lecturers 1,360; institutions of higher education 2, students 4,371, teachers 442.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 254 (185); barley 65; oats 88; rye 30 (22); sugar, raw value 27; potatoes 793; tobacco (1948) 1·7. Livestock ('000 head, April 1949): cattle 1,478; pigs 887; sheep 183; horses 138; goats (April 1948) 187; chickens 6,100. Meat production ('000 metric tons, 1948; 1949 in brackets): total 130 (164), of which beef and veal 58 (82); pork 68 (80). Dairy produce ('000 metric tons, 1949; 1950, six months in brackets): butter 14·5 (6·3); cheese 49·4 (20·3); milk 2,409.

Industry. Industrial establishments (1949): 11,566; persons employed 496,573. Electricity (million kwh., 1949; 1950, six months, in brackets) 7,764 (4,090). Index of industrial activity (1938=100, 1948; 1949 in brackets): building 123 (115); cotton 101 (94); silk 126 (121); embroidery 103 (105); metals 152 (142); watchmaking 135 (131); chemicals 178 (166); foodstuffs 133 (128). Index of manufacturing employment (1937 = 100, 1949) 127.

Foreign Trade. (Million francs, 1949; 1950, six months, in brackets.) import 3,792 (1,786); export 3,456 (1,643). Main sources of imports (1949): U.S. 20%; France 10%; Germany 9%; U.K. 7%. Main destinations of exports: U.S. 12%; Belgium-Luxembourg 9%; Germany 9%; France 7%; U.K. 5%. Main imports: wheat 5·2%; machines 5·2%; coal 5·1%; fruit and vegetables 5·0%; edible animal products 4·9%. Main exports: machines 22·3%; watches 20·3%; textiles 12·3%; implements and apparatus 6·5%; chemical dyes 6·1%.

Transport and Communications. Roads (1949): 10,250 mi. Licensed motor vehicles (Dec. 1949): cars 123,009; commercial 38,512. Railways (1949): 3,345 mi.; passenger mi. 3,475 million; freight net ton-mi. 1,066 million; freight carried ('000 tons) 15,732. Shipping (1948): number of merchant vessels 12; total gross tonnage 40,818. Swissair traffic (1949): miles flown 5,350,928; passengers flown 153,812; freight carried (metric tons) 1,733·4; air mail carried (metric tons) 603·4. Telephones (1949): subscribers 537,614. Receiving sets (1949): 986,679.

Finance and Banking. (Million francs) budget (1949): revenue 1,423, expenditure 1,424; (1950 est.) revenue 1,622, expenditure 1,466. National debt (1948; Dec. 1949 est. in brackets): 10,794 (11,000). Currency circulation (Sept. 1949; Sept. 1950 in brackets): 4,702 (4,682). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 1,529 (1,619). Bank deposits (June 1949; June 1950 in brackets): 6,337 (7,238). Monetary unit: *franc* with an exchange rate of Fr.12·25 to the pound and Fr.4·36 to the U.S. dollar.

See J. Russell, *Switzerland* (London, 1950); A. Siegfried, *Switzerland: A Democratic Way of Life* (London, 1950).

SYNTHETIC PRODUCTS: *see* CHEMISTRY; PLASTICS INDUSTRY; RAYON AND SYNTHETIC FIBRES; RUBBER.

SYRIA. Independent Arab republic, formerly under French mandate, bounded by the eastern Mediterranean, Turkey, Iraq, Jordan, Israel and Lebanon. Area: 72,200 sq.mi. Pop.: (1938 census) 2,930,107, including the inhabitants of Hatay ceded to Turkey in 1939; (1946 est.) 3,662,000. Language: Arabic is the mother tongue of some 86% of the population, but Kurdish, Armenian, Turkish and Circassian are also spoken. Religion (1943 est.): Moslem 2,424,700 or 85% (Sunni Arabs 1,721,000, Shia Arabs 12,700, Sunni Kurds 200,000, Sunni Turks 30,000, Sunni Circassians 20,000, Druze 87,200, Alawi 325,300, Ismaili 28,500); Christian 403,000 or 14% (Roman Catholic rites 103,800 [Greco-Melchite 46,700, Armenian 16,800, Syrian 16,200, Maronite 13,400, Latin 6,000, and Chaldean 4,700]; Eastern Churches 288,000 [Greek Orthodox 137,000, Gregorian Armenian 101,700, Syrian Jacobite 40,100 and Nestorian 9,200]; Protestant 11,200); other 1% (Jewish, Yezidi, etc.). Chief towns (pop., 1946 est.): Damascus (cap., 303,900); Aleppo (337,800); Hama (134,200); Homs (106,000); Latakia (90,700). President, Hashem el Atassi; prime ministers in 1950, Khalid el Azam and (from May 29) Nazim el Kodsi.

History. In January Egypt and Saudi Arabia offered support to the Khalid el Azam cabinet provided that a republican regime in Syria would be maintained. On May 29 a new cabinet under Nazim el Kodsi took office and on Sept. 6 the Constituent Assembly published the new constitution to replace that first promulgated by the French mandatory, which had been swept away by the Husni ez Zaim *coup d'état*. The new constitution strengthened the legislature by providing that the president must sign legislation within three days or refer it to a state council constitutionally established. Other provisions were that the president must be a Moslem, that Moslem law was the basis of legislation and that there would be freedom of worship for "all revealed religions." The new Chamber of Deputies approved the constitution by 105 votes to 6 and Hashem el Atassi, up till then temporary chief of the state, became president and Nazim el Kodsi re-formed his cabinet.

Economically Syria suffered severely during 1950 from the rupture in March of the Lebanese-Syrian customs union; and to relieve the position created by the closing of the Lebanese frontier to Syrian exports, the government published plans for the improvement of port and road facilities at Latakia, as an alternative to the ports of Beirut and Tripoli, the cost to be met from a $6 million loan from Saudi Arabia.

In February the government rejected sponsorship by the Conciliation Commission for Palestine of two "pilot projects" for the drainage of the Ghab marshes and the harnessing of the Orontes river. Instead they announced a comprehensive plan of their own which included, as purely Syrian undertakings, the two "pilot projects" and also schemes for the supply of water for Aleppo from the Euphrates; a Damascus electric supply from the Yarmuk; and a Latakia electric supply from the river Sind. Later in the year a budget of £S 43 million was published providing for all five works.

During the year the construction of the Syrian section of the Arabian American Oil company's pipeline from the Persian gulf to Sidon in the Lebanon was completed. Agreement for this construction had been reached with the Zaim government; and in April the new government accepted an advance payment of $1·5 million towards expenses. After the promulgation of the new constitution, however, it was announced that the Zaim concession would have to be ratified by the new parliament.

Syria was prominent in the deliberations of the Arab league (*q.v.*) and associated itself with the resolution qualifying Jordan's annexation of Arab Palestine and signed the Arab states' collective security pact. In August a treaty of friendship with Pakistan was signed in Karachi. In July there was friction with Israel over a clash near the Sea of Galilee between the frontier troops on both sides.

General Sami Hinnawi who, on Aug. 14, 1949, had overthrown and executed the dictator Husni ez Zaim and Muhsin Barazi, his prime minister, and who on Dec. 14, 1949, was removed by another *coup d'état* from his position of commander in chief of the Syrian army, was assassinated on Oct. 30, at Beirut, by Mohamed Ahmed Barazi, a cousin of Muhsin Barazi. (O. Tw.)

Education. Schools (1949): primary 977 (including 373 private), secondary 35 (including 13 private), foreign 41; institutions of higher education 3; university 1.

Agriculture. Main crops ('000 metric tons, 1947; 1948 in brackets): wheat 550 (540); barley 169 (260); maize 28 (30); oats 5 (5); potatoes 15 (15); rice 22 (22). Fruit production ('000 metric tons, 1948; 1949 in brackets): grapes 150 (150); olive oil 13 (18); oranges and tangerines 3 (3). Livestock ('000 head, Dec. 1947): sheep 3,176; goats 1,185; cattle 354; horses 141; donkeys 230; mules 47; chickens 937.

Industry. Production (1947): cotton yarn ('000 metric tons) 1·5; natural and artificial silk textiles (million metres) 4·8; box calf and kidskin leather ('000 square metres) 29·0; salt ('000 metric tons) 18·8; cement 41·4; asphalt 14·5.

Foreign Trade. Syro-Lebanese customs union was terminated in March 1950. *See* LEBANON.

Transport and Communications. Roads (1946) 3,966 mi. Licensed motor vehicles (Dec. 1949): cars 4,647; commercial vehicles 5,521. Railways (1949) 539 mi. Telephones (1948) 6,200. Radio receiving sets (1949) 30,000.

Finance and Banking. (£S million) budget estimates: (1949) balanced at 130·7; (1950) balanced at 142·8. Currency circulation (Aug. 1949; Aug. 1950 in brackets) 196 (233). Monetary unit: Syrian *pound* with an exchange rate (pre-devaluation, 1949; Nov. 1950 in brackets) of £S 8·85 (6·13) to the pound and £S 2·19 (2·19) to the U.S. dollar.

TABLE TENNIS. The world championships were held in Budapest in Feb. 1950. The men's singles title was recaptured by Richard Bergmann (England), his fourth victory. Angelica Roseanu (Rumania) beat Gizi Farkas (Hungary), who had been champion for three years, in the women's singles final. The men's team event (Swaythling cup) was won by Czechoslovakia, who beat Hungary after a narrow 5—4 win over England. The winners of the women's

team event (Marcel Corbillon cup), Rumania, likewise defeated Hungary after a 3—2 win over England. F. Sido and F. Soos (Hungary) won the men's doubles, F. Sido and G. Farkas the mixed doubles, H. Elliot (Scotland) and D. Beregi (England) the women's doubles.

English championship winners at Wembley in March were: men's singles, R. Bergmann; men's doubles, V. Harangozo and A. Dolinar (Yugoslavia); women's singles, M. Shahian (U.S.); mixed doubles, J. Leach and M. Franks (England). The twin sisters R. and D. Rowe of Middlesex, 16 years old, won the women's doubles title.

Results of the open championships at Wembley in December were: men's singles, A. Ehrlich (France); men's doubles, J. Carrington and Leach; women's doubles, R. and D. Rowe; women's singles, Miss T. Pritzi (Austria) and mixed doubles, V. Barna and Miss Elliott. In April at St. Louis Leach became the first Englishman to win the U. S. national titles, taking the men's singles, the men's doubles (with Carrington) and the mixed (with S. Green Prouty). (I. MU.)

TAIWAN: *see* FORMOSA.

TANGANYIKA. British trusteeship in east Africa, former German East Africa, bounded N. by Uganda and Kenya, E. by the Indian ocean, S. by Mozambique and Nyasaland and W. by Northern Rhodesia, the Belgian Congo and Ruanda Urundi. Area: 362,688 sq.mi. Pop.: (1948 census): 7,412,327, incl. 7,335,291 Africans, 16,299 Europeans, 44,435 Indians, 2,056 Goans, 11,952 Arabs and 2,294 others; Africans mostly Bantu, but considerable areas in the north occupied by the Hamitic Masai and in the south by tribes of Zulu extraction. Language: Swahili generally understood. Religion: Africans mainly pagan, but a large Moslem population in coastal areas; Christian Africans 991,700, incl. 700,100 Roman Catholics. Capital, Dar-es-Salaam (pop., 1948 census, 69,277). Administration: governor; executive council; Legislative Council, 15 official and 14 unofficial members, the latter comprising 7 Europeans, 4 Africans and 3 Indians. Governor, Sir Edward Francis Twining.

History. In Feb. 1950 a select committee of non-official members of the Legislative Council consisting of seven Europeans, four Africans and three Asians was appointed by the governor to study constitutional reform in consultation with all sections of the population. During the year this committee travelled throughout the territory, its proceedings in most areas being marked by a high degree of constructive co-operation from all three races. In January an ordinance was passed extending the maximum period for agricultural leases from 33 to 99 years. In February there was a disturbance at Dar-es-Salaam during a dock strike in which one rioter was killed. The second provincial council, that for the Southern Highlands, was inaugurated on March 7. Nine Anglican bishops, including an African, from all the dioceses of east and central Africa met at Minaki on Jan. 20.

With the resignation of Sir Leslie Plummer from the chairmanship of the Overseas Food corporation in June considerable reorganization of the groundnut scheme was started. In spite of the normal rainfall, the harvest at Kongwa was deplorably meagre, though yields at Urambo and in Southern Province were more promising. It was decided in October that arable cultivation in the Kongwa area should be confined to 12,000 ac. for the next three years, instead of the 450,000 originally planned (*see* AGRICULTURE).

Preliminary surveys for the proposed rail-link between Northern Rhodesia and Tanganyika were well in hand; the Colonial Development corporation was granted development rights over the southern coal fields; a large meat-canning plant (half in government ownership) was opened near Dar-es-Salaam; a contract was let for a 150-mi. tar-macadam road between Namanga and Taveta; and an Indian agricultural school established at Morogoro. It was announced that 300,000 ac. of land at Essiningor would be made available for ranching purposes. (*See* also TRUST TERRITORIES.)

Finance and Trade. Currency: East African shilling (20s. = £1 sterling). Budget (est. 1950): revenue £11,646,508; expenditure £11,641,388. Foreign trade (1949): imports, £27,576,110; exports, incl. re-exports, £20,724,985. Principal exports: sisal (1949, £11 million) cotton, diamonds, coffee. (K. G. B.)

TANGIER. From 1912 an international and demilitarized zone of Morocco on the southern shore of the Straits of Gibraltar. Area: 232 sq.mi. Pop.: (1941 Spanish est.) 102,300 including 16,500 Europeans, 36,500 native Moslem and 7,000 native Jews; (mid-1949 est.) 150,000 including 30,000 Europeans. Language: Arabic, French and Spanish. Religion: mainly Moslem. When the one-sided incorporation of Tangier into the Spanish zone of Morocco (Nov. 3, 1940) had been terminated on Oct. 11, 1945, international administration was re-established with a committee of control composed of the resident consuls general of France, Great Britain, the United States, the U.S.S.R., Belgium, the Netherlands, Portugal and Spain. The Soviet representative refused to take his seat on the committee as long as Franco Spain was represented. Italy was re-admitted to the committee on March 8, 1948. The committee of control appointed a legislative assembly of 26 members (4 French, 4 Spaniards, 3 British, 3 Americans, 1 Belgian, 1 Dutchman, 1 Portuguese, 3 Jews and 6 Moslems). Tangier remained under the nominal sovereignty of the sultan of Morocco and his representative (the *mendub*) was Haj Mohamed el Tazi. Administrator (from Aug. 1948), Jonkheer H. L. F. C. van Vredenburch.

The steady expansion of Tangier since 1945, both as a place of political refuge and as a resort for capital, continued, and there were signs of a land boom. United States preponderance in trade and finance was marked. It was estimated that some £30 million in gold was banked in Tangier, and there was much activity in the conversion of sterling accounts in London and elsewhere in the sterling area into dollars. Seventy-three gold ingots landed surreptitiously from an aircraft near Périgueux in October, and believed to be contraband, bore seals marked "Tangier." A trade deficit of £7 million a year compelled renewed attention to the prevalence of smuggling, and in April new measures were announced by the committee of control to prevent abuse of the free port facilities. Ships carrying cargo were warned that all papers must be in order. The step was regarded as a first breach in the policy of *laissez-faire*.

Two infringements of Tangier's neutrality came to light in April. The leader of a Moslem sect was convicted on charges of gun-running between Tangier and Morocco, and five anti-Franco Spaniards resident in the territory disappeared. Earlier, in February, the Spanish consul had addressed a memorandum to the mendub complaining of the prevalence of subversive activities. German and Japanese nationals were admitted to Tangier from August for periods not exceeding four months. A United States school opened in October with pupils of 11 nationalities, though mostly Moorish. An Egyptian request, also in October, for permission to establish an Egyptian cultural institute in Tangier was reported to have caused concern in French and Spanish quarters, since it was feared that such a centre might be used as cover for Arab nationalist activities. (W. C. AN.)

TARIFFS. The relative importance of tariffs among various obstacles to the free flow of international trade continued to increase in 1950. For one thing, a buyer's market was developed in a large and increasing number of

manufactures and even in some raw materials. This meant that price was once more becoming important in determining the importers' choice and that consequently high tariffs again became an effective factor in competition. Moreover, the extent to which trade was blocked by quantitative restrictions and currency control declined during 1950. So long as quantitative restrictions and currency control were the predominant factor it was of little importance whether customs tariffs were high or low, for the flow of trade was effectively determined by bilateral agreements, by embargos or quotas on imports and exports and by the allocation of foreign exchange to importers. During 1950 considerable progress was made towards the elimination of quantitative restrictions, especially in trade within Europe. The Organization for European Economic Co-operation which in 1939 decided in favour of a 50% reduction of quantitative restrictions within Europe increased that proportion to 60%. In October it was decided to achieve a further reduction up to 75%. Likewise, export difficulties due to shortages of foreign exchange also declined during the year as far as intra-European trade was concerned. The O.E.E.C. countries succeeded in concluding a payments agreement under which a high degree of multilateralism was achieved. With the decline of the currency obstacle and of quantitative restrictions it was inevitable that more attention should be paid to the tariff factor.

The actual reductions of tariffs during 1950 were not very important, but progress was made towards more effective reductions in future. The wave of enthusiasm about regional customs unions which had characterized the situation in 1949 abated somewhat in 1950. No new regional pacts were concluded, and plans for the geographical extension of existing pacts failed to materialize. Nor was there any appreciable progress towards a European customs union. On the other hand the Benelux countries (Belgium, the Netherlands and Luxembourg) made progress towards making their customs union more effective, taking steps to adjust their respective customs tariffs and to bring about corresponding changes in their excise duties. In March France and Italy concluded a series of technical agreements for the implementation of their agreement of 1948 for the establishment of a customs union. The earlier agreement, however, was still not ratified either by the French parliament or by the Italian parliament.

The endeavours initiated in Geneva in 1947 to negotiate simultaneously a large number of trade pacts continued during 1950. In September the representatives of 39 countries met at Torquay for that purpose. All the participating countries were signatories of the Geneva agreement on tariffs and trade, but the admission of new participants, including Japan, was envisaged. One of the subjects on the agenda was the preparation of the way for the establishment of the International Trade organization. The main object was, however, to resume what had come to be known as "multilateral concurrent bilateral negotiations." Such negotiations had produced appreciable results in Geneva in 1947 and at Annecy in 1949. The main talks were conducted with the countries that were the principal suppliers of certain goods to the importing countries, but it was often necessary to initiate subsidiary negotiations with secondary suppliers benefiting by most favoured nation clauses (otherwise they would have automatically benefited by concessions made in favour of the principal supplier without having to make any sacrifices to earn those concessions). It was found also that negotiations with the main suppliers were greatly facilitated if part of the price of concessions made to them was paid by the secondary suppliers, the presence of whose representatives thus resulted in much economy of time and effort. Nevertheless, all concessions achieved through these multilateral negotiations were liable to be terminated at short notice until the establishment of the I.T.O. In view of the fact that both the U.S. and the U.K. decided not to ratify the Havana charter, hopes for the establishment of the I.T.O. had to be abandoned. In the majority of instances, moreover, the agreement merely aimed at safeguarding exporters against further increases of tariffs. An effort was made at Torquay to commit the participants to an undertaking not to increase tariff charges until the beginning of 1954. The results of the Torquay conference were generally regarded as disappointing.

The main effort of most countries was directed towards persuading the United States to reduce its tariff. But the U.S. representatives continued to insist on ending preferential arrangements in return for any tariff reductions, though they showed themselves more willing to consider them than at any time since 1930. The administration indeed was prepared to consider reductions on between 2,500 and 3,000 items, and a bill to simplify and expedite customs proceedings was introduced into congress (too late, however, for action in 1950). One of the objects of this bill was to reduce the expenses attached to customs proceedings. It provided for changes in valuation methods. Its provisions did not fully meet British and other demands for the removal of the formidable "invisible tariff-wall," but efforts were made to persuade U.S. customs officials that it was not their patriotic duty consistently to prevent imports from abroad at all costs, since such imports were needed for the payment of debts owed to the U.S. or for the reduction of the need for the U.S. taxpayer to finance U.S. exports. Progress towards freer trade was not however uninterrupted on all fronts. In the U.S. new duties were imposed on some raw materials, and legislation was introduced to impose one on imported copper, although its application was suspended for some time. On the expiry of the trade agreement between the U.S. and Mexico the import duty on oil was doubled and, because of the most favoured nation clause, this increase affected oil imports not only from Mexico but also from Venezuela, the middle east, etc. The same factor also affected the import duty on lead and other raw materials. Another noteworthy symptom was the tendency for export duties to reappear, a result of the sharp rise in the price of such raw materials as Australian wool, Malayan rubber, Swedish newsprint, etc. The governments of the countries concerned felt impelled to consider the imposition of export duties partly in order to reduce the inflationary effect of greatly increased earnings by the producers and exporters of the materials, partly in order to maintain a comparatively low price for domestic consumers.

Additional national requirements for rearmament and stockpiling were a contributory cause of the tendency towards exports duties. Apart from this, however, rearmament did not in 1950 make itself felt in the sphere of tariffs. It did not even check the trend towards lower tariffs and towards the removal of other forms of trade restrictions. Nevertheless, there were indications that a situation might develop in which shortages of goods essential for national defence or a deterioration of currency reserves would cause a reversal of the trend towards freer trade. (*See* also EXCHANGE CONTROL AND EXCHANGE RATES; INTERNATIONAL TRADE.) (P. EG.)

TASMANIA: *see* AUSTRALIA, COMMONWEALTH OF.

TAXATION. Generally, 1950 was a year of consolidation and minor adjustment. After the drastic changes during World War II and in the first postwar years the fiscal authorities in many countries had at last a much needed breathing space to tidy the position created by hastily produced measures. In most European and Commonwealth countries

budgetary equilibrium had been reached, at any rate so far as ordinary expenditure was concerned. There was, therefore, no need for any new fiscal effort from that point of view. Nor was there any urgent need for large-scale disinflationary mopping up of purchasing power by means of additional taxation. It was true, prices in all countries were rising, but for the most part the rise was due to the boom in the U.S. and, later, to rearmament. Both factors caused a sharp rise in the prices of raw materials. The only countries where disinflationary taxation was called for were the raw material producing countries such as Australia and the Federation of Malaya. Some governments felt they could even afford to reduce slightly their total taxation. This was done in Western Germany and New Zealand. Other countries, including the United Kingdom, reduced some taxes, but replaced the loss in revenue by other increases.

A comparison between taxation trends in 1950 with those of the previous year led to these broad conclusions: (1) In both years the rates remained well above prewar and there was no sign of any substantial reduction. The only difference was that by 1950 it had come to be more generally recognized that the level of taxation was likely to remain high. (2) There was in a number of countries a tendency during 1950 to lower direct taxation in order to provide additional incentive to production. Generally, indirect taxation remained unchanged or was even raised. (3) Political and social factors continued to dominate the fiscal policies of most countries, and general economic considerations continued to play a more important part than purely financial considerations. (4) Raw material producing countries felt justified in 1950 in imposing export taxes on their staple products: the Australian wool tax of 20% was an example. (5) The yield of taxation on the basis of unchanged rates continued to increase, partly because of larger industrial outputs, and partly as a result of rising prices.

United Kingdom. Tax receipts for 1949-50 were estimated at £3,686 million against actual receipts of £3,675 million the previous year. Budget estimates for 1950-51 were £3,666 million. Although the total remained substantially unchanged there were material changes in the yield of various sources of revenue. The special contribution (capital levy) imposed in 1948, which yielded £80 million in the first year, only brought in £19 million in 1949-50 and £4·5 million in 1950-51. This decline was more or less compensated by the increase in the yield of income tax, which reached a new record level, and of other taxes.

The budget of 1950 contained a minor concession to small income tax payers. The revenue thus lost was made up by an increase of the petrol tax and the imposition of a tax on commercial vehicles. The efforts made in parliament by the opposition to induce the government to reduce purchase tax were of no avail. Indeed, the government took the precaution of safeguarding itself against the unpopularity of having to resist amendments moving purchase tax reductions, by obtaining the adoption of a rule under which the reduction of rates of individual purchase tax items could not be proposed.

Although during the summer the government decided to increase national defence expenditure considerably there was no urgent need for raising additional money, and it decided not to introduce a supplementary budget in the autumn. Nevertheless, tax increases during more advanced phases of rearmament were foreshadowed. The chancellor of the exchequer, Sir Stafford Cripps, stated on July 10 that it would be a mistake to assume that Great Britain had reached the limit of her taxable capacity, as there were possibilities of increasing indirect taxation and death duties. Moreover, since various taxes on income had been reduced by £650 million since 1945 there was scope for their increase.

In October the appointment of a royal commission on taxation was announced. The object of this commission, as of two previous committees dealing with taxation problems, was to simplify the system of taxation in order to reduce the cost of its collection and to ease the burden of tax payers whenever this was possible without loss of revenue. Further progress was made towards the collection of war and postwar arrears of income tax. A further large number of agreements were concluded between the United Kingdom and other countries for the avoidance of double taxation and tax evasion. Other European countries concluded similar agreements, the advantages of which were gradually realized.

It was widely believed that the year witnessed the last of tax reductions for some time. Although there might be minor downward adjustments the chances were that these would be outweighed by tax increases necessitated by growing expenditure on armaments. At the same time, however, much of the additional expenditure was likely to be covered through the increased yield of existing taxes resulting from the sharp rise in prices. There was a general determination among governments not to finance rearmament by inflationary means, so that it seemed probable that additional taxation would be imposed whenever, with rearmament getting into its stride, deficits appeared.

Commonwealth. In Australia the assessment of income tax was adjusted to enable private concerns to obtain extra amounts of profit free of undistributed profits tax. The sales tax was removed from building materials and from some foodstuffs. On the other hand, it was increased on various luxuries in order to absorb some of the additional purchasing power created by the spectacular rise in the price of wool. A much more important measure to that end was the imposition of a levy of 20% of the amount realized on the sale of wool during the current season, as advance payments of income tax. The yield from this was estimated at £A 103 million. In Canada, tax collections reached a new high record in September when ordinary revenue amounted to $210·5 million against $171·3 million in August.

In India the foreign income of residents in India was exempted from double taxation by means of a corresponding refund. The income tax paid by companies was reduced but company supertax was increased. In 1949-50 the estimated customs revenue was Rs. 1,114 million out of a total taxation revenue of Rs. 3,713 million. In New Zealand the 33⅓% surtax on unearned income was repealed. This was possible because, in spite of national defence expenditure, the budget had been balanced.

In South Africa, in order to meet a very small deficit, the postal, telegraph and telephone charges were raised. Petrol tax was increased by 3*d.* a gal. and the proceeds allocated to the National Road board for highway development. The yield of gold mining taxation was estimated at £SA 18·5 million for 1950-51 but much depended on the full effect on mining costs of devaluation and on the extent to which low grade ore was mined as a result of the higher gold price.

Europe. In March the German Federal government proposed to reduce the income tax mainly on large incomes. The occupation authorities objected on the ground that this would cause a deficit. Thereupon the government promised measures to tax luxuries and to reduce tax evasion, as a result of which it expected that, in spite of the tax reduction, the budget would be balanced. Consequently the occupation authorities withdrew their veto. It was expected, however, that owing to the increase of defence expenditure it would be necessary to increase income tax at an early date. In Italy a tax reform bill was introduced in July under which income tax was to be assessed in future on the basis of the taxpayer's declaration instead of being assessed by the authorities on the estimated size of their incomes. In the

Netherlands it was decided to raise gradually the tax on companies from 33¼% to 40%. The additional yield was estimated at Fl. 100 million a year. In Belgium steps were taken to simplify the fiscal system. In the Irish republic estimated customs receipts during 1949-50 increased to £25·5 million (from £23·8 million). The yield from income tax and supertax declined slightly to £15·9 million.

Middle East. In Egypt the estimated yield of direct taxation during 1949-50 increased to £E 22 million from £E 16 million, and the proceeds from customs duties increased to £E 36 million from £E 24 million. In Israel no extra tax was imposed in 1950 because the yield from existing taxation was expected to increase through more efficient collection. During the previous fiscal year there had been an increase in the yield from customs and excise, luxury taxes and property taxes; however, the yield from death duties had declined. (P. EG.)

United States. The 1950 fiscal year closed on June 30 with a budgetary deficit of $3,122 million. The budget for the 1951 fiscal year, as proposed, anticipated a deficit of $5,133 million. After taking into account the prospective increased revenue and the decrease of some forms of expenditures, the secretary of the treasury indicated in December a prospective budgetary deficit of about $2,000 million, but a substantial cash surplus. It was estimated by the Senate finance committee that the increase in revenues from the Revenue act of 1950 during the fiscal year ending June 30, 1951, would be nearly $3,000 million and for the succeeding year, the first full year of the new law's operations, about $4,500 million.

From a fiscal point of view the most significant features of this legislation were the increases in income tax rates applicable to corporations and individuals, estimated to increase tax receipts by $1,500 million and $2,700 million respectively, for a full year's operation.

For the calendar year 1950, corporations were required to pay, under the new law, a normal tax of 23% on all income and a surtax of 19% on income over $25,000. For the calendar year 1951 and for fiscal years beginning on or after July 1, 1950 these rates were set at 25% for the normal tax and 20% for the surtax. Provision was made for prorating the increased rates in the case of fiscal years beginning before July 1, 1950, and ending after June 30, 1950. Aside from periods when excess profits taxes had been in force, these rates represented all-time highs, comparing with an aggregate rate of 40% for the period 1942-45, 19% for 1939, 11% for 1929 and 1% when the corporation income tax was first instituted in 1913.

For individuals the increase took a more complicated form. For the year 1949, the basic tax rates followed a schedule enacted in the Revenue act of 1945, but were subject to certain percentage reductions. The 1950 bill eliminated one-quarter of such reductions for the calendar year 1950 and all of such reductions for the calendar year 1951. The new law did not revoke the increased personal exemptions and dependency credits granted in 1948 nor did it eliminate the privilege then accorded to married couples to divide their joint income equally between them on the community property principle. With these exceptions, the Revenue act of 1950 returned personal income tax rates to their all-time peaks reached during World War II.

Tapping a new vein, the 1950 law included in the tax base the income of charitable and other previously exempt organizations from any business regularly carried on by them which was unrelated to the main charitable or other purpose forming their basis for exemption.

The U.S. Excess Profits Tax Act of 1950 was passed by congress on Jan. 1, 1951. It imposed both an excess profits tax and increased the rate of the corporation surtax. For taxable years beginning after June 30, 1950, the rate of surtax was increased from 20%, established by the Revenue act of 1950, to 22%.

The excess profits tax followed in general the pattern of the tax in force during World War II. Before determining the amount of income subject to excess profits tax the taxpayer was permitted to reduce his income by a credit, such credit being, at the taxpayers' election, 85% of the average of the highest three out of four years in the 1946-49 period, or a percentage of invested capital, 12% where invested capital was not more than $5 million, 10% where invested capital was from $5 million to $10 million and 8% where invested capital exceeded $10 million. A flat $25,000 credit was granted where the credit as otherwise computed would have been below that sum. Relief provisions were included in the case of abnormalities during the 1946-49 base period, new and growing corporations and corporations which effected a substantial increase in their capacity for production or operation during the base period. Certain minimum credits, not allowed under the World War II excess profits tax, were allowed railways, telephone and telegraph services, airlines and public utilities, on the theory that such concerns were subject to governmental rate regulation and hence should be accorded more lenient excess profits tax treatment than nonregulated businesses. The effective date of the excess profits tax under the act was June 30, 1950, and the basic rate was set at 30%, effective for taxable years beginning on or after July 1, 1950.

The aggregate normal tax, surtax and excess profits tax was limited by the new law to 62% of income, which produced $1,321 million. (J. DE.)

TEA. Tea production in India and Pakistan in 1950 totalled approximately 575 million lb. and 46 million lb., respectively, as against 590 million and 46 million in 1949. Production in Ceylon in 1950 totalled slightly less than 300 million lb ; *i.e.*, about as much as in the previous year. Production in Indonesia, which averaged 165 million lb. in 1934-38, was estimated at 75 million in 1950, as against some 60 million in the previous year. There were no official figures for China, but the estimated output in 1950, although probably higher than in 1949, was still well below the prewar level of about 600 million lb. Japan's tea production in 1950 was estimated at more than 80 million lb., as against about 74 million in 1949. British East Africa produced about 17 million lb. in 1949 and Nyasaland some 14 million; production in 1950 was estimated at a slightly higher level.

Large scale exports were again confined mainly to India, Pakistan and Ceylon. In 1949-50, exports from India and Pakistan totalled 414 million lb. and 34 million lb. respectively, as against 375 million and 24 million in 1948-49; more than two-thirds of the total in both seasons went to the United Kingdom. Exports from Ceylon in 1950 totalled approximately 298 million lb., or about the same quantity as in the previous year; the United Kingdom was again the chief market. Indonesian exports in 1950 totalled some 60 million lb. (48 million lb. in 1949; prewar average 160 million lb.).

From 1947 onwards the Ministry of Food in the United Kingdom was concerned with procuring supplies for the domestic market alone and operated by means of bulk purchase filled by tenders from individual growers. During 1950, however, it was decided that the London tea auctions should be re-opened on April 2, 1951. The United Kingdom remained the chief market for tea supplies, its imports in 1949 and 1950, at 474 million lb. and 369 million respectively, exceeding the total imports of all other countries in these years. Average annual imports into the United Kingdom before World War II totalled about 450 million lb. The United States was the second largest importer of tea, taking 114 million lb. in 1950 as against 95 million in 1949. Australia received 60 million

lb. in 1950, an increase of 12 million lb. over the previous year. Canada received 55 million lb. in 1950, about 12 million more than in 1949. (J. E. CE.)

TEACHERS, TRAINING OF. In many countries recruitment of a sufficient number of teachers continued to be difficult, and in some rather desperate training expedients seemed to have been adopted. For example, in July it was announced from Poland that, to obtain primary school teachers, courses were to be organized for boys and girls graduating from *licea* and for adults. Among the courses planned for recruits were 10-day vacation courses for people who would then start teaching in primary schools and add to their qualifications by part-time study supervised by the regional commissioners for training colleges.

In Czechoslovakia a new system of teacher training was introduced in July whereby kindergarten teachers would attend colleges providing specialized courses similar to those of health and social workers and elementary teachers would attend specially established regional colleges. These would be at first one-year courses. Secondary school teachers would be given a three-year course in the pedagogical faculties of the universities. It was stated in September that 63% of all Slovak teachers had undergone political training.

In September it was announced that during the previous year 36 new teacher training colleges had been opened in the U.S.S.R. New Soviet teaching methods were stated to have been introduced in Rumanian schools at the opening of the school year 1950-51. In Albania the Institute of Pedagogy, founded in 1946 on the Soviet model, held its first final certificate examination. This covered Marxism-Leninism, pedagogy and the principal academic subjects.

Scotland's Educational institute—the all-embracing teachers' association—at its annual general meeting in June once more voiced its uncompromising opposition to any lowering of professional standards by reiterating its belief in an all-graduate profession and urging the Scottish Education department to withdraw the authority for the employment of the 900 uncertificated persons teaching in Scottish schools.

In England, ministerial regulations governing grants to teacher training colleges, effective from August, for the first time included colleges for training technical teachers. Because of the replacement in 1951 of the school and higher school certificate examinations by a single examination for the general certificate of education new academic qualifications for admission to a training college were defined. These were: five passes at ordinary level, or four at ordinary and one at advanced, or two each at ordinary and advanced, or three at advanced with a general background of other subjects. These demands were markedly less exacting than those for university entry. (H. C. D.)

TECHNICAL EDUCATION. There was a steady increase in the number of opportunities for vocational education and experience in many countries. For example, to encourage young workers to improve their qualifications and knowledge of languages, the Brussels Treaty powers (Belgium, France, Luxembourg, the Netherlands and United Kingdom) agreed in April on a covenant to facilitate the exchange between them of trainees up to 30 years old, of either sex, engaged in manual or intellectual occupations. With the consent of the five governments the covenant could be extended to other countries. Similar arrangements were made under cultural conventions between countries under the Soviet aegis.

At the meeting of the International Association for the Exchange of Students for Technical Experience held at Helsinki, Finland, in January the U.S. and Germany were admitted to membership. Arrangements were made for 1,700 interchanges in 1950, an increase of 460 over 1949; 1,672 exchanges took place. The Ministry of Education in London announced in January the offer of 50 post-graduate awards for technological study in U.S. institutions during the academic year 1950-51. These would be financed by the Economic Co-operation administration.

In November the National Advisory Council on Education for Industry and Commerce, in a report entitled *The Future Development of Higher Technological Education*, recommended the establishment for England and Wales of a national body, to be called the Royal College of Technologists, with powers to approve suitable courses of advanced technology submitted by technical colleges and to make the awards of associateship (for a first award, equivalent to a university degree), membership (for post-graduate study), fellowship, and honorary fellowship.

Australia. In February the foundation stone of the New South Wales University of Technology building at Sydney was laid. The N.S.W. government announced plans to expand the art department of the East Sydney Technical college (which in 1949 had nearly 3,000 students, and was the largest in Australia) into a national art school. The Victoria Ministry of Education set up a committee to consider the proposal to establish a technical university at Melbourne.

India. The All-India Council for Technical Education received a discouraging report about the four higher technical institutions planned. Only that for the eastern region at Hijli had done any real preliminary work by July. Land and a few buildings had been provided in West Bengal. Bombay had provisionally selected a site. The north and south regions had done nothing. In all India there were only 7,700 technical students, and 55% failed to pass their examinations.

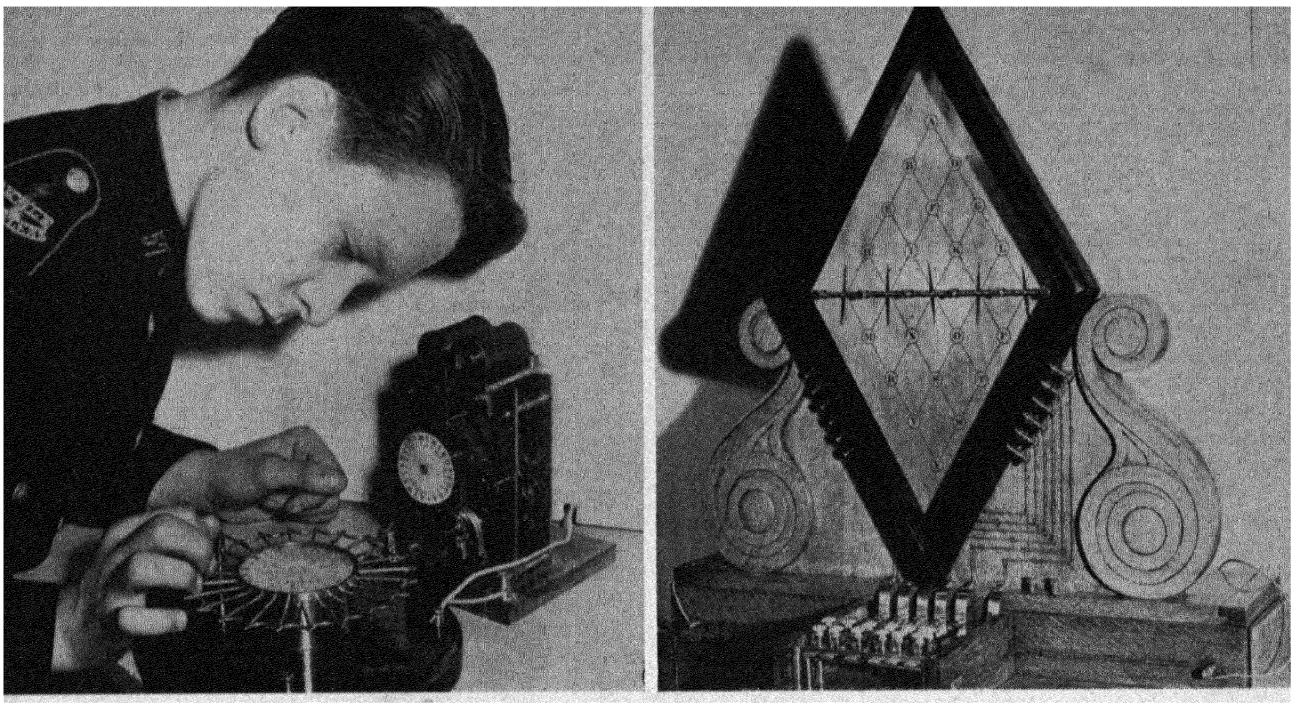
British Colonies. The Colonial Office announced in February that two new colleges of arts, science and technology were to be established in British West Africa, one to serve the Gold Coast and the other Nigeria. They would supplement the provision made by the university colleges by providing courses of higher technical and commercial education.

Hungary. The establishment of 3-yr. agricultural schools was announced in May, and in July it was stated that a technical university would be built at Miskolc for 1,800 students. In August it was announced that the 27 technical and industrial schools were to be increased by early 1951 to 52, covering 11 industries.

Poland. In May the vocational training system was reorganized in two grades: first, a basic vocational school for skilled workers, replacing the industrial and secondary vocational schools; second, a school for technicians, replacing the first and second grade *licea*. In August reorganization of agricultural education was announced, the existing schools to be replaced by 200 4-yr. schools. (H. C. D.)

TELEGRAPHY. The year 1950 saw the end of the first phase of the reorganization of the British Commonwealth's overseas telegraph services in accordance with the Commonwealth Telecommunications agreement on May 1948. Of the governments party to the agreement, Australia, New Zealand, South Africa, India and Southern Rhodesia had previously taken into state ownership their external telegraph services; Canada did so on June 7, the Canadian Overseas Telecommunication corporation having been formed on Jan. 1 to take over the overseas services formerly operated by the Canadian Marconi company and Cable and Wireless Ltd.

Reorganization was carried a step further within the United Kingdom on April 1, when the post office (*q.v.*) took



Two of the instruments shown at an exhibition at the Science museum, London, in 1950, to commemorate the centenary of the first submarine cable. An early transmitter and receiver (left) and a five-needle telegraph instrument made in 1837.

over the operation of Cable and Wireless Ltd.'s services in the United Kingdom with the corresponding assets and operating staff. Foremost among the assets transferred were the London telegraph station in Electra house, Victoria embankment, London, and the wireless stations at Ongar, Brentwood, Dorchester, Somerton and Bodmin. The cable station at Porthcurno, near Land's End, Cornwall, remained however the property of the company, which continued to operate it (on Porthcurno beach are landed the 11 ocean cables which link the United Kingdom with the Commonwealth cable network). The changes in the United Kingdom took place under the Commonwealth Telegraphs act, 1949.

The effect on Cable and Wireless Ltd. of the measure of reorganization carried out up to this point was to leave it, from April 1 onwards, with the following main responsibilities: (1) ownership, maintenance and development of the 155,000-mi. cable system linking the units of the Commonwealth (including crown colonies) with each other and with those foreign countries in which the company and its associated companies held concessions; (2) operation, with a few exceptions, of the external telecommunications (by cable and wireless) of the crown colonies; and (3) operation of the external cable and wireless services in foreign countries in which concessions were held by the company. The company remained the largest single undertaking engaged in international telegraphy. Although its share capital was now owned by the United Kingdom Treasury, it continued to be a limited liability company subject to the act in the United Kingdom and to the laws of each of the other countries in which it operated.

A remarkable feature of the year 1950 was the continuation of the upward trend of international telegraph traffic in terms of words handled by the Commonwealth system. In 1938, the last full year of peace before World War II, the number of words handled reached a prewar peak figure of 231 million. In 1944, the last full year of war, the traffic rose to 704 million words. There was a decline during the first two postwar years; but in 1948, when 624 million words were handled, traffic was again increasing, and in 1949 631 million words were handled. The figure for 1950 was expected to be about 645 million.

Analysis of the 631 million words handled in 1949 showed that 494 million were accounted-for by commercial messages —an increase of 25 million over the corresponding figure for the previous year. Social traffic remained stable in 1949, while government and press traffic declined by 7 million and 11 million words respectively. The continued increase of commercial traffic accounted for much of the total traffic increase during 1950.

Cable and Wireless Ltd. had for several years been sponsoring the development of submarine telegraph repeaters for insertion at intervals of about 100 mi. in ocean cables lying at depths of up to 3½ mi. It was assisted in this work by the Post Office research station at Dollis Hill, London (which was developing the amplifying equipment to be enclosed in the repeaters), and by the Telegraph Construction and Maintenance company in Greenwich (which was devising the water-tight casing). In 1950 this work was sufficiently advanced to justify preparations for the laying in 1951 of a test length of 600 mi. of co-axial cable in deep water between two cable stations on the shores of the Atlantic. At the close of 1950 practical tests were about to be carried out by a cableship in the laying and picking-up of co-axial cable in which a dummy repeater had been inserted.

Whereas the type of ocean cable in use over most of the network in 1950 permitted only about four channels of communication by telegraphy to be worked simultaneously, the post office's experience with its shallow water cables across the Irish channel and the North sea showed that a successful issue of the development work in deep-sea repeaters would permit more than 50 channels to be worked simultaneously, either by telegraphy, telephony or phototelegraphy over distances as great as 2,000 mi.

Progress in the development of the Commonwealth system of wireless communications was substantial. The new electronic regenerators which were being manufactured at the end of 1950 could re-form distorted " received " signals automatically and pass them on as substantially perfect signals and were expected to improve the system of relays used to maintain services on certain trunk routes during ionospheric interference with direct wireless working. The single side-band system of receiving radio-pictures led to

better pictures being received in inferior wireless conditions.

Radio-telephone circuits were likewise progressively transferred to the single side-band system. A number of new radio-telephone circuits were introduced; *e.g.*, from Hong Kong to the United Kingdom and to the United States. Plans were being made to the introduction of an improved system of privacy on the main Commonwealth radio-telephone circuits.

The arrangements to simplify the categories of international telegrams agreed at the International Telegraph conference in Paris (1949) were brought into operation on July 1: ordinary rates (plain language, code and cipher) were unified; deferred telegrams were abolished; and two classes of letter telegrams were put into a single category.

Arrangements were made by Cable and Wireless Ltd. in October to send a field wireless telegraph station to Korea to handle Commonwealth troops' messages and war correspondents' despatches. Personnel and equipment sent from London to Hong Kong by air and thence by sea, reached Korea in November. The unit was to work direct to the company's station at Hong Kong, whence the messages were to be relayed.

Development of the Commonwealth system in the far east was pressed forward during the year to meet the continued and rapid growth of traffic to and from that region. On Nov. 25 the governor of Hong Kong, Sir Alexander Grantham, formally opened the new Electra house, headquarters of Cable and Wireless Ltd., on Hong Kong water-front—a ten-storey ferro-concrete building to be the centre of British far eastern telecommunications.

On Oct. 13 Cable and Wireless Ltd. placed an order for a new cable-repair ship to be built on Tyneside, the completion of which would bring the company's fleet to a strength of nine ships.

To meet the growing demand for technicians and engineers to maintain the system, Cable and Wireless Ltd. in June opened a school of engineering adjacent to the station at Porthcurno, to give the latter half of an 18-months' training course to batches of 30 students. (A. S. A.)

United States. By 1950 the nation's telegraph system had twice its World War II capacity and had greatly increased its efficiency.

A nation-wide system of high-speed message centres was completed in 1950. A big centre placed in operation at Portland, Oregon, in November, to serve as the funnel for telegrams to and from four northwestern states, was the 15th and last area centre, completing the network. Through the new system, which was installed as a part of Western Union's $100 million programme of mechanization and other plant improvements, telegrams are typed only at their points of origin and flash through the centres to their destinations without manual retransmission at any point. To interconnect the 15 high-speed message centres and provide direct circuits between them and other cities, about 2 million channel miles of carrier circuits were installed. Carrier systems permit the transmission of as many as 288 telegrams simultaneously over a single pair of wires, or more than 2,000 simultaneously over a microwave radio beam system. The Western Union Telegraph company had in operation between New York, Philadelphia, Washington and Pittsburgh a microwave radio beam transmission system, with towers about 30 mi. apart. This system operated without interruption through the most severe storms.

A new nation-wide private telegraph system known as the "bank wire" was placed in operation in November and December. It interconnected 188 banks in 54 cities with fast and efficient record communications. The bank wire had a potential capacity of more than 3 million telegrams monthly. Each bank in the network had a printing telegraph machine over which messages were transmitted at typing speed to one of the high-speed message centres in the bank wire network, which were located at New York Chicago, San Francisco, Dallas and Atlanta. At these five centres trained operators flashed the bank messages instantaneously and automatically to the banks of destination by the mere push of a button. "Telecars," equipped with facsimile recording apparatus which receives telegrams automatically while the car is in motion, were being placed in service in Baltimore. While the telegram is being received, the telecar starts on its way to the address to deliver it.

The world's first long submarine cable amplifier was inserted in a Western Union transatlantic cable between Penzance, Cornwall, and Bay Roberts, Newfoundland, in Oct. 1950, and increased the speed of the cable from 300 to 1,000 letters a minute. The amplifier was inserted in the cable northeast of Bay Roberts where the depth of the ocean is 1,700 ft. The success of the first amplifier led to a decision to install similar equipment on five other transatlantic cables more than to double the capacity of the five cables.

(W. P. MA.)

TELEPHONE. Limitations of the financial, material and manpower resources available to the Post Office in Great Britain in 1950 continued to restrict its programme of telephone development and expansion and necessitated concentration on minimizing the inconvenience caused by inability to provide telephone service for large numbers of applicants and on maintaining the quality of the existing services. Resources therefore, as in previous years since World War II, were applied mainly to fuller exploitation of exchange plant *in situ*. Priority was given to applicants for whom service was essential from the national point of view; shared service was provided for waiting applicants; new kiosks were installed for the public; and the trunk network was expanded.

Special circuits were developed so that shared service with separate metering could be extended to nearly every type of automatic exchange; this would remove a major objection to shared service by making it possible for each sharing subscriber to be charged individually for all automatically completed calls that he might dial direct.

In pursuance of the post office policy of complete automatization, 200 new small automatic exchanges were brought into use, and 45 large manual exchanges with a total capacity of 79,500 exchange lines were converted to automatic working.

With a view to meeting any future difficulties in the supply of lead, trial was made of cables having a thin lead sheath with an outer covering of polythene.

During the year, 2,474 telephone kiosks were installed and 932 obsolete kiosks replaced.

The capacity of several long-distance trunk routes was extended by the conversion of 12-channel carrier systems to 24 channels. One co-axial system was re-equipped and taken back into service and one new co-axial system opened. In addition one existing system was equipped to its maximum operating capacity of 600 speech channels. Preparatory work was carried out for the laying of a new submarine cable between Scotland and the Isle of Man. A new six-channel radio telephone link between Alderney and Guernsey had been opened in Dec. 1949.

Plans were completed for the mechanization of the trunk and toll network within a period of ten years, and the design of a London trunk tandem dialling exchange was well advanced. Under this system the intervention of a second operator would be unnecessary on calls to subscribers connected to automatic exchanges.

TELEPHONES IN SELECTED COUNTRIES OF THE WORLD (Jan. 1, 1950)

Country	Total	Per 100 population	Automatic (Dial) Number	Automatic (Dial) % of total
Europe :				
Austria	371,780	5·3	287,243	77·3
Belgium	649,555	7·5	484,364	74·6
Bulgaria*	57,000	0·8	24,000	42·1
Czechoslovakia*	380,000	3·1	225,000	59·2
Denmark	680,703	15·8	276,512	40·6
Finland	313,975	7·7	169,210	53·9
France	2,318,673	5·6	1,411,678	60·9
Germany, Eastern*	300,000	1·4	200,000	66·7
Germany, Western	2,112,728	4·4	1,062,012	50·3
Greece	75,947	1·0	72,000	94·8
Hungary*	115,000	1·2	85,000	73·9
Iceland	19,600	13·9	12,533	63·9
Ireland	73,431	2·5	46,279	63·0
Italy	1,118,685	2·4	1,015,105	90·7
Luxembourg	21,971	7·6	15,779	71·8
Netherlands	692,412	6·9	615,498	88·9
Norway	430,881	13·3	249,122	57·8
Poland*	225,000	0·9	150,000	66·7
Portugal	132,300	1·5	66,376	50·2
Rumania*	135,000	0·8	100,000	74·1
Spain	606,066	2·2	454,400	75·0
Sweden	1,593,522	22·8	985,708	61·9
Switzerland	845,471	18·2	808,644	95·6
Trieste	25,000	6·9	20,000	80·0
U.S.S.R.†	1,500,000	0·7	400,000	26·7
United Kingdom	5,177,370	10·2	3,650,429	70·5
Yugoslavia*	80,000	0·5	48,000	60·0
North America :				
United States	40,709,398	27·1	27,579,158	67·7
Alaska	14,618	11·2	4,150	28·4
Canada‡	2,700,000	19·6	1,530,800	56·7
Cuba	113,718	2·1	95,027	83·6
Jamaica	12,248	0·9	11,720	95·7
Mexico	273,555	1·1	181,096	66·2
Panama	11,800	1·5	0	—
Puerto Rico	37,210	1·7	19,473	52·3
Trinidad and Tobago	13,546	2·1	8,931	65·9
South America:				
Argentina	717,000	4·4	535,000	74·6
Bolivia	7,900	0·2	7,450	94·3
Brazil	517,000	1·0	390,000	75·4
Chile	131,344	2·3	87,607	66·7
Colombia	76,729	0·7	36,000	46·9
Ecuador	8,791	0·2	1,000	11·4
Paraguay	5,200	0·4	4,500	86·5
Peru	44,400	0·5	36,025	81·1
Uruguay	84,000	3·6	61,548	73·2
Venezuela	59,300	1·3	55,442	93·5
Africa:				
Algeria	90,601	1·0	64,088	70·7
Egypt*	106,000	0·5	70,000	66·0
Morocco	58,022	0·5	40,326	69·5
Tunisia	23,422	0·7	13,665	58·3
Union of South Africa	415,518	3·4	288,976	69·5
Asia:				
Ceylon	15,839	0·2	13,549	85·5
China*	250,000	§	175,000	70·0
Hong Kong	24,729	1·2	24,729	100
India	128,911	§	54,000	41·9
Indonesia	35,750	§	769	2·2
Iran	21,435	0·2	8,625	40·2
Iraq	16,249	0·3	11,213	69·0
Israel	24,686	2·1	21,371	86·6
Japan	1,681,279	2·0	563,334	33·5
Korea, Republic of*	75,000	0·3	25,000	33·3
Lebanon	13,300	1·1	0	—
Malaya	20,362	0·4	6,846	33·6
Pakistan	17,445	§	8,718	50·0
Philippine Republic	15,968	§	12,102	75·8
Singapore	15,736	1·6	15,736	100
Turkey	58,169	0·3	49,862	85·7
Oceania:				
Australia	1,066,385	13·2	651,561	61·1
Hawaii	100,062	19·1	93,427	93·4
New Zealand	348,539	18·2	204,701	58·7

* Estimated. † Including all Asiatic territory, estimated. ‡ Including Newfoundland. § Less than 0·1%.

The overseas telephone services were extended during the year. A landline service with Turkey was reopened, and direct circuits to Belgrade and Helsinki were brought into use. Albania was now the only European country with which the telephone service was not available. The speed of connecting calls to Paris, Belgium and Switzerland was improved, and a service comparable with inland trunks was now given on these routes. New radio telephone services were opened with Israel (direct) and with Aden, Malaya and Singapore (*via* Nairobi). The ships (liners) telephone service was available to certain French and Italian ships. (G. P. O.)

United States. The telephone industry in the United States during 1950 continued to go forward with its record-breaking expansion and improvement activities. The industry gained 2·2 million telephones during the year, including approximately 300,000 in rural areas, to bring the total number of telephones in service to 42·9 million. Of these 35·3 million were operated by the Bell system. The remainder were served by the several thousand non-Bell telephone companies, and additional thousands of farmer-owned lines. About 60% of all U.S. families had telephone service.

Among outstanding developments in telephony in 1950 was the installation of two new submarine telephone cables between Key West, Florida, and Havana, Cuba, containing the first underwater "electronic amplifiers." The amplifiers boost electrical voice currents weakened by the resistance of long spans of wire. The parts of these amplifiers, including the electron tubes, were especially designed and manufactured by the Bell Telephone laboratories for stability and long life. They were expected to withstand pressures encountered in depths up to three miles and lie undisturbed on the ocean bottom for many years. Power for the amplifiers is supplied over the cables from shore.

World. On Jan. 1, 1950, the world total of telephones was estimated at about 70·3 million. The U.S. had about 58% of the world's total; second and third were the U.K. (5,177,370) and Canada (2,700,000) respectively. The U.S. per capita telephone development was 27 per 100 persons while Sweden was second with 23 and Canada third with 20. The world as a whole had 3 telephones per 100 population. New York City continued to lead the world's cities in the number of telephones, with 2,956,832. This was more than in any country in the world except the United Kingdom. London was second with 1,526,548 telephones, and Chicago third with 1,495,900. (L. A. WI.)

TELEVISION. The prospect of a shared television service for Europe receded as a result of decisions taken in 1950: a study group was set up in 1948 by the Comité Consultatif des Radiocommunications, a European body, to investigate the various characteristics of television transmissions with a view to international standardization. Between July 1949 and May 1950, the group, under a Swedish chairman, toured in the U.S., France, the Netherlands and Britain. It was unable to reach agreement. Irreconcilable differences of opinion on the standard (number of lines) that should be adopted existed.

Great Britain, not surprisingly as she was the only European country with a complete television service, believed that her 405-line standard would amply suffice for many years to come. It was suitable for existing conditions in that it did not call for expensive receiving apparatus and it fully satisfied the taste of the public. This was made clear to the group by the General Post Office. France on the other hand was committed to a standard of 819 lines and made it known in 1950 that she would not give it up. The reasons guiding her were the necessity, as she saw it, of giving images comparable in quality with those of the cinema, the desirability of using large screens, the lower rate of depreciation on a more lasting



Mrs. Clement Attlee and Wilfred Pickles at the opening of the children's hour studios of the B.B.C. television service at Lime Grove, London, May 1950. Centre is Jennifer Jay (aged 15) who was the announcer of the children's programmes.

system and the belief that an 819-line system could be readily adapted to colour.

Seven other European countries, including Italy, declared for 625 lines hoping to get something of the best of both worlds—an economical service of high quality. This was highly theoretical argument, since no country had operated a 625-line service except under laboratory conditions and since it remained extremely unlikely that any of the seven countries, except possibly the Netherlands, would be in a financial position to operate a public service for years to come. The Netherlands announced its intention of inaugurating an experimental service in the spring of 1951, but it was made clear that for two years at least the transmissions would be experimental.

Progress in Great Britain was considerable. Plans were issued for a television city in southwest London which would be the first of its kind in the world. The construction of the third and fourth high-power transmitters, in Yorkshire and Scotland, proceeded smoothly and both were due to open in 1951. Two studios were brought into operation at the British Broadcasting corporation's second studio centre at Lime Grove, Shepherd's Bush, London. A recording system enabling programmes to be photographed off the end of the cathode ray tube for subsequent transmission was successfully brought into use. Elaborate outside broadcasts including one from Calais, on the French coast, and one from an aircraft in flight were the feature of the year's programmes which in December included a daily children's hour and a newsreel which was changed three times a week.

France, in spite of a shortage of funds, in April opened a transmitter at Lille, the first outside Paris. Programmes still emanated from Paris and were ingenious rather than artistic. A great part of the transmission time was taken up with rather old French films. Public interest was small and fewer than 20,000 sets were in operation.

Outside Europe and the U.S. the tale was still mostly one of hope deferred and experiments to come. Canada appointed a senior staff under Fergus Mutrie and Aurèle Seguin to supervise the erection of production centres in Toronto and Montreal. Orders were placed for transmitter equipment in the U.S. and for studio equipment in England. Australia was at the end of the year considering tenders for an experimental station to be built outside Sydney. Mexico on the other hand actually began transmissions which were principally of bull-fights on Sunday afternoons. The U.S.S.R. announced "further extensions" of a service the details of which were not known outside the U.S.S.R. The standard receiver in Moscow and other large cities had a 4½-in. screen. A model with a 7-in. screen was shortly to be made available. This compared with the model in Great Britain which had an 8-in. screen. (X.)

United States. During the first nine months of 1950, the Federal Communications commission held extensive hearings on colour television. Three specific systems were demonstrated: a field-sequential system (Columbia Broadcasting system) in which the picture is scanned from top to bottom in each of three primary colours in sequence; a line-sequential system (Color Television, Inc.) in which a change in colour occurs at the end of each scanning line; and a dot-sequential system (Radio Corporation of America) in which the colour is changed for each picture element or dot. After the hearing was concluded an additional system, frequency interlace (General Electric), was proposed but not demonstrated.

The commission's first report established criteria for an approved system and concluded that the field-sequential system proposed by the C.B.S. was satisfactory for commercial television broadcasting in spite of the fact that this system was not "compatible," that is, the C.B.S. colour signals could not be received in either black-and-white or colour on existing receivers without the use of an adapter. The commission noted that the sale of television receivers was continuing at a high rate and the compatibility issue would become increasingly important the longer a decision was delayed. The first report stated that unless manufacturers would agree to modify future receivers in accordance with proposed "bracket standards," which would permit the reception of field-sequential colour signals as well as monochrome signals the commission would be compelled to standardize on the field-sequential system in order to prevent obsolescence of the monochrome receivers which were being purchased by the public. Nearly all manufacturers responding to the commission's report expressed the view that the modification of their receivers to accommodate "bracket standards" could not be accomplished in the time specified and would increase the cost of sets unduly. Doubt was expressed, in the light of the incompatibility of the field-sequential system, whether colour programmes would be broadcast in sufficient quantity to make the public's additional investment worthwhile.

In its second report the commission reviewed the responses of the manufacturers and in accordance with its first report concluded that it would adopt the C.B.S. field-sequential system as standard for commercial colour television broadcasting effective on Nov. 20, 1950.

Court proceedings were instituted by the R.C.A. and other radio manufacturers attacking the commission's action. A restraining order was obtained in Chicago preventing the inauguration of commercial colour television broadcasting. At the end of the year it seemed evident the issue would be submitted to the Supreme Court. In the meantime the C.B.S. and R.C.A. gave public demonstrations of their systems.

Receivers. Based on actual production figures for the first ten months of 1950, total production of television receivers for the year was estimated at 7·2 million—more than twice the number produced in 1949. Picture tube production increased correspondingly with an estimated total of 7,840,000. In television receivers the pronounced trend towards larger pictures which began in 1949 continued in 1950, the majority of the receivers produced using 16-in. or larger picture tubes. A tube 30 in. in diameter was announced by the Allen B. DuMont laboratories. The trend toward lower prices likewise continued in the early part of the year; but in midsummer increases in material and labour costs

caused a reversal in this trend, which was accentuated on Nov. 1 by the application of an excise tax which increased the retail prices of television receivers by an average of about 6%. Restrictions on the use of cobalt and other essential materials made it apparent at the end of the year that the number of television receivers produced in 1951 would be much smaller than in 1950.

Stations and Networks. At the end of 1950, 107 stations were operating on a regular schedule in 58 metropolitan areas, an increase of nine stations for the year. Advertising revenues rose rapidly, from about $28 million in 1949 to $84 million in 1950. Network facilities at the end of the year extended in the eastern United States from Boston in the north to Jacksonville, Atlanta and Birmingham in the south, and to Chicago, Milwaukee, Minneapolis, Omaha, Kansas City and Memphis, in a westerly direction; and in the western United States between Los Angeles and San Francisco, linking in all 51 cities. (*See* also RADIO, SCIENTIFIC DEVELOPMENTS IN.) (G. L. Bs.)

TENNIS (sometimes called royal tennis and, in the United States, court tennis). Pierre Etchebaster, at the age of 56, successfully defended the world championship for the sixth time when he beat Alastair B. Martin of New York, 7—0. Martin won the British amateur singles championship in 1950, when he defeated W. D. MacPherson 3—1 in the final round at Queen's club, London, on May 3.

Great Britain won the Bathurst cup at Queen's club on May 15 when, having beaten France by 3 rubbers to love, they defeated the holders, U.S.A., by 3 rubbers to 1. Great Britain were represented by R. C. Riseley and P. Kershaw and U.S.A. by A. Martin and W. E. Lingelbach. R. C. Riseley won the Gold Racket (M.C.C. prizes), at Lords on July 15, when he beat W. D. MacPherson, the holder, 3—1. MacPherson won the Silver Racket on July 20 by beating R. Aird, the holder, 3—1.

Cambridge beat Oxford at Lords on July 14-15 by 2 rubbers to 1, winning the singles on the first day. Eton won the Public Schools Old Boys competition (Henry Leaf cup) on Jan. 22 when they beat the Old Rugbeians by 2 rubbers to 1. (*See* also LAWN TENNIS.) (AE.)

TEXTILE INDUSTRY. The British textile industry in general suffered in 1950 from the cumulative effects of many adverse factors. World demand for textiles of every kind was unprecedented, but the limiting influences were shortages in the basic raw materials including cotton, wool, silk rayon, flax, jute and the range of the more recent man-made fibres. Prices, high production-costs and insufficient skilled labour were also disturbing; and inequalities in the levels of consumption in the different parts of the world were more pronounced than at any time since the war. Shortage of sterling in certain countries coupled with shortages of U.S. dollars and of Swiss and Belgian francs affected production in some of the supplying countries and at the same time prevented a substantial volume of demand from becoming internationally effective. World demand for wool was phenomenal, and wool sales in Australia for the 1949-50 season realized £A 286,500,000, which was £A 92 million more than for the previous season and about seven times the amount received for the 1938-39 clip. In addition a 7½% levy was announced in August on all sales of wool in Australia. Total consumption of wool, which received impetus from events in Korea, China and the U.S.S.R., was approximately 25% higher than production. The joint organization set up to secure the orderly liquidation of wartime stocks of dominion wools had to augment clip offerings with substantial offerings from its own stocks. Half way through the year the stocks of surplus wool were estimated to be down to 500,000 bales whereas there had been a surplus of over 10 million bales when the organization began liquidation late in 1945. Output by the wool industry increased and total deliveries of worsted yarn in September comprised 19·61 million lb. (*cf.* 16·89 million lb. in the same period in 1949). Woven wool fabrics amounted to 39·03 million sq.yd. (as against 35·38 million), woven blankets to 2·58 million sq.yd. (as against 1·67 million); and the United Kingdom produced 26·73 million lb. of merino and crossbred tops in Sept. 1950 (*cf.* 23·29 million in Sept. 1949).

The cotton industry recovered likewise. Board of Trade statistics showed that production of single cotton yarns in September was 16·21 million lb. (as against 15·81 million in 1949). Waste yarns, alarmingly short at 1·88 million lb. in Sept. 1949, increased to 1·97 million lb. in Sept. 1950. Production of doubled yarns also increased (5·18 million lb. as against 4·82 million). Similar increases were noted in cotton cloth at 40·2 million linear yd. (as against 38·3) and rayon and mixture cloths at 13·5 million linear yd. (as against 12·9). Machinery included 27·8 million mule-equivalent spindles (82%) running in Sept. 1950 (*cf.* 26·1 million, or 77%, in 1949). The figures for doubling spindles were 2·84 million (as against 2·59), for looms running 310,000 (as against 286,000). In finished manufactures exports claimed priority; but rising prices operated in favour of overseas competitors, particularly where quality was a secondary consideration. The total export value of filament rayon yarns, rayon staple and fabrics, ribbons, lace, etc. made from rayon was £3·90 million in Sept. 1950 as against £3·06 million in the previous year.

Flax production in Great Britain was neglected, with a consequent decline in quality; but the linen industry, using more spun rayon, produced many attractive fabrics. Other sections of the industry also used more rayon. Nylon production increased steadily, but the quantities available were not enough to meet demand. The British jute industry, badly affected by the deadlock between India and Pakistan, ran only at approximately 65% of 1939 production. More than £3 million had been spent since World War II to modernize plant and machinery, etc., but despite this the industry was faced with an increasing shortage of labour which limited sales in home and dollar markets. Ramie fibre again came into prominence in view of developments in mechanical decorticating.

Large-scale research resulted in considerable technical development, augmented in certain instances by the information compiled by the various teams sent to the U.S. under the auspices of the Anglo-American Council of Productivity. An outstanding introduction was a continuous machine for dyeing fabrics with the aid of molten metal. A new double-deck heavy-package uptwister featured flexible-type spindles fitted with extra heavy roller-bearing inserts. Another development was a new gripper carpet-loom embodying several patented devices. Shortened processing systems in cotton-spinning received considerable attention, and steady progress was noticeable in the increasing adoption of high-draft systems and various mechanical aids for such purposes as lifting and transporting. There was an increasing use of new metal alloys in warp beams, bobbins, etc., and more use of plastics for these and other applications. Other developments included electrical loom pilot-switches, tungsten carbide and ceramic thread-guides, yarn-tension meters, variable-speed drives, fluorescent lighting, liquid-flow indicators, machines for measuring lengths of fibres, yarns and fabrics and an instrument for measuring and recording irregularities in textile laps and slivers. Attention was given to methods for reducing noise, and synthetic rubber-cushioned skew bevels for driving cotton speed-frames aroused keen interest. Synthetic rubber mounts were also adopted in many

instances for securing looms in position without bolts or screws. Further advances were observed in electrical automatic control of machines and processes. One particular application was remote control of lines of machines for cotton-waste breaking and others included instantaneous control on magazine warping creels: immediately an end breaks, the motor stops and a light appears in the bank of yarn packages concerned. Progress was also made on the suppression of dust in opening processes: one line of approach was spray oiling of blends.

Dyestuff production rose, and demand increased for dyestuffs with greater fastness to light and washing. A new short-table screen-printing machine was announced, consisting of two magazines, each with space for eight printing frames, and fitted with a rise-and-fall motion. Considerable interest was also shown in a new electrically driven hydro-extractor, with automatic time-clock control and a unique spring-suspension system.

A new mill was opened by Courtaulds, Ltd., at Girlington, Bradford, for the development of rayon staple/wool blends in Yorkshire-type fabrics. The new rayon-spinning factory at Carrickfergus, Northern Ireland, was expected to employ 1,600 people on viscose yarn production. At an international exhibition of knitting machinery at Leicester in October the latest British, American and European winding, twisting and knitting machines and accessories were shown.

Europe. European countries were badly affected by inadequate supplies of raw materials, but production and exports of yarns and piece-goods steadily expanded. Restrictions on the natural fibres was met to some extent by an increase in man-made fibres. Germany developed some new drop-box looms and a shuttleless loom claiming greatly increased speeds. A French circular loom attracted considerable attention, as did a Belgian automatic loom in which nickel-molybdenum acicular cast-iron for the picking shafts and components was said to have virtually eliminated breakages in service. Swiss technical engineers further investigated their high-speed precision-built specialities. Details were also announced of Czech developments, including an automatic weft winder, a high-speed beam warper with magazine creel, two types of automatic looms, a heavy cotton loom and a pirn-changing attachment for looms, in addition to dobbies and jacquards.

Commonwealth. The Pakistan government planned to set up more cotton mills in Eastern and Western Pakistan: cotton was abundant, but power had to be provided and labour trained. The erection of jute mills was encouraged, and a company was formed to erect three at Marayanganj, of 1,000 looms each; the machinery for these was to be ordered from the United Kingdom. In Australia woollen cloth output increased by approximately 125% on prewar figures, and textile industries were employing 35% more operatives than in 1939. Cotton, wool and rayon manufacturing steadily expanded, and some interesting new solvents, soaps and other detergents used in scouring wool, etc., were announced. (A. DR.)

United States. Under the pressure of military demand, use of textile fibres increased steadily during 1950 with every prospect of continued expansion during the years immediately ahead. Cotton consumption in the U.S. was about 25% higher in 1950 than in the previous year. Wool consumption in 1950 was up by about 30%. Silk deliveries for domestic consumption were slightly more than double those of the comparable period in 1949. Shipments of synthetic fibres were also 3% higher than in 1949.

United States shorn wool production during the calendar year 1950 was estimated to total 218 million lb., grease basis

World production of raw wool during the 1950-51 season was estimated by the U.S. Department of Agriculture at 4,000 million lb., representing an increase of 3½% over the output during the previous season, and being the highest level since the five seasons 1939-40 to 1943-44 inclusive. (*See* also CLOTHING INDUSTRY; COTTON; LINEN AND FLAX; RAYON AND SYNTHETIC FIBRES; SILK; WOOL.) (D. G. WO.)

THAILAND (SIAM). Kingdom of southeastern Asia bounded W. and N.W. by Burma, N.E. and E. by French Indo-China and S. by Malaya. Area (excluding the territories taken from Indo-China in 1941-46): 198,270 sq.mi. Pop.: (1937 census) 14,464,105; (1947 census) 17,317,742. The 1937 census revealed only 524,062 Chinese (3·6%), but it included as Siamese the Chinese born in Thailand, whose number already in 1929 was 113,050. Language: Thai (Siamese) 75%; Chinese 20%; Indian and Malayan 5%. Religion (1947 est.): Buddhist 95%, Moslem 4%. Chief towns (1947 census): Bangkok (cap., 884,197); Khon-kaen (590,664); Chiengmai (534,628); Chieng-rai (481,621). Ruler, King Phumiphon Adundet (*q.v.*); prime minister, Marshal Luang Pibul Songgram.

History. The administration led by Marshal Pibul remained in office, with only slight changes, throughout the year. The political scene was relatively calm and the country suffered none of the violent disturbances such as occurred in Feb. 1949. There was some excitement on Jan. 27 when it was known that General Kach Songgram, one of the leaders of the extreme militarist section of the army, had been arrested with 14 other officers. It was generally believed that the arrests were designed to prevent a military *coup d'état*. General Kach was deported to Hong Kong where he still remained at the end of the year.



King Phumiphon Adundet leaving the royal palace in Bangkok, March 1950. He returned to Thailand for his coronation and wedding.

King Phumiphon arrived in Bangkok from Switzerland on March 20 amid scenes of great enthusiasm. On April 28 he was married to the daughter of the Siamese ambassador in London, and on May 5 his coronation took place. He left Thailand again for Switzerland on June 5. The trial of three men accused of complicity in the death of King Ananda Mahidol on June 9, 1946, continued throughout the year and still did not reach its conclusion. It could not be said that the evidence given shed any real light on this mysterious tragedy.

In the field of foreign relations, on Feb. 28 the Thai government extended recognition to the Bao Dai regime in Vietnam, though this step, which appeared to commit Thailand to the anti-Communist camp in the "cold war," was not taken without a cabinet crisis and was followed by the resignation of Nai Pote Sarasin from the office of foreign minister, not on account of any sympathy on his part for the Communist cause in Indo-China but, it appeared, owing to dislike of French policy; he was succeeded by Nai Worokarn Bancha. Later, in July, the government gave approval to the action of the United Nations in regard to Korea and undertook to send a military force of 4,000 men to assist in the defence of South Korea against the Communist attack. In a speech delivered to the departing troops on Oct. 7, the prime minister declared that Communism was opposed to monarchy, religion and property and that in fighting in Korea they would be defending their own country, for it was necessary to stop Communist aggression in Korea in order to save their own land in the future.

Thailand continued to co-operate with the Malayan authorities in taking precautions for the peace of the southern border, and also sought co-operation with the United States. In April the U.S. government agreed to give aid in military equipment to the extent of $10 million; on Sept. 19 an economic and technical co-operation agreement with the United States was signed, and this was followed by the arrival of experts to advise in matters of railways, harbours, minerals, public health, etc.; in the same month a U.S. military mission visited the country. The government obtained assistance also from the International Bank for Reconstruction and Development, which on Oct. 30 announced the issue to Thailand of loans totalling $25·4 million for the rehabilitation of railways, port development, irrigation and drainage and inland water communications.

Production during the year was satisfactory. In August the production of tin-ore reached a postwar maximum of 1,388 tons; rice exports (to the end of September) amounted to 1,100,900 tons as compared with 943,800 tons in the corresponding period of 1948. (B. R. P.)

Education. Schools (1948): government 440, pupils 63,581; local public and municipal 18,670, pupils 2,081,414, teachers 62,028; private 1,501, pupils 167,629; universities 5, students 10,494.

Agriculture and Fisheries. Main crops ('000 metric tons) (1948; 1949 in brackets): rice 5,506 (5,630); maize 10; cotton 6 (6); tobacco 10·0. Livestock ('000 head, Dec.): cattle (1949) 5,000; pigs (1947) 2,000; horses (1948) 230; buffaloes (1948) 5,500. Fisheries: total catch ('000 metric tons, 1948; 1949 in brackets): 161 (195·8).

Industry. Raw materials (metric tons, 1949; 1950, six months, in brackets): rubber (net exports) 95,730 (53,913); tin in concentrates 7,941 (4,267). Cement production (1949) 127,000 metric tons.

Foreign Trade. (Million baht, 1949) imports 2,297; exports 2,809. Main sources of imports: Hong Kong 12·8%; Japan 10·3%; Malaya and Singapore 8·7%; United Kingdom 7·8%. Main destinations of exports: Malaya and Singapore 31·0%; India 10·3%; Hong Kong 9·5%; Indonesia 7·3%.

Transport and Communications. Roads (1948): 3,578 mi. Licensed motor vehicles (Dec. 1949): cars 6,600; commercial 4,800. Railways (1949): 2,033 mi.; passenger-mi. (1948) 812 million; freight net ton-mi. (1948) 187 million. Air transport (1949): mi. flown 1,212,000; passenger-mi. 11,767,000; cargo ton-mi. 174,000; mail ton-mi. 32,000. Telephones (Bangkok, 1948): 5,586. Wireless receiving sets (1949): 36,000.

Finance and Banking. (Million baht) budget: (1949-50 est.) revenue 1,254·8, expenditure 1,577·7; (1950-51 est.) revenue 1,596·7, expenditure 2,052·1. Currency circulation (Dec. 1948; Dec. 1949 in brackets): 2,205 (2,365). Bank deposits (Dec. 1948; Dec. 1949 in brackets): 912 (1,000). Monetary unit: *baht* or *tical* with an exchange rate (Nov. 1950) of 35·00 bahts to the pound and 12·50 bahts to the U.S. dollar.

THEATRE. A red-letter day in Britain's theatrical calendar of 1950 was Nov. 14 when the Old Vic company came home to its theatre in Waterloo road, London, after an exile of 11 years. The years of exile had been years of splendour and the company was returning like a conqueror, having won for itself a position of international fame such as even Lilian Baylis could hardly have imagined possible. In its peak years when Sir Laurence Olivier and Sir Ralph Richardson were directors it had attained to a dizzy eminence. It had established a standard higher than anything known in our time and had then been expected to keep up to that standard season by season in the West End of London. In its own home it could again be allowed a certain measure of unpretentiousness. This being so it was perhaps rather a pity that the opening production of the autumn season lacked simplicity. The play chosen was *Twelfth Night* and no better choice could have been made. It seemed, however, that the director, Hugh Hunt, lacked the full courage of his convictions and felt a certain compulsion to avoid obviousness. His production seemed unnecessarily mannered, particularly as he had a perfect Viola in Peggy Ashcroft and a fine team of actors to give her support. The second production of the season, the first full-scale revival within living memory of Ben Jonson's *Bartholomew Fair* showed a heartier spirit. In the spring season the company had found in Michael Redgrave a Hamlet worthy of honour and in June had been invited to Zürich, Switzerland, and to Elsinore, Denmark. At the same time another Old Vic company was invited to the International Festival of the Arts in Florence and toured other Italian cities.

At Stratford-on-Avon there was also an event of significance, the appearance of John Gielgud at the head of the company which now ranked second to none. In the days before World War II when Gielgud stood alone at the head of our classical actors the idea that he should devote his talents in the depths of Warwickshire would have seemed unthinkable both in Stratford and in London. The fact that he, Peggy Ashcroft, Godfrey Tearle and Diana Wynyard together with other players of like standing were regular members of the company in 1950 was the exact measure of the change which had come both to public taste and the confidence of the Shakespeare Memorial theatre in itself.

In the West End the year lacked something of the distinction of its predecessor. In general managements seem to find it difficult to obtain workmanlike plays and as a result there were several dead failures. This was the more disappointing



Mr. Preston (Sir Ralph Richardson), Mrs. Preston (Marian Spencer) and Dr. Sparling (Cyril Raymond) in "Home at Seven" at Wyndham's Theatre, London.



Olivia (Ursula Jeans, seated) and Viola (Peggy Ashcroft, centre), disguised as a boy, in "Twelfth Night," the first production at the Old Vic theatre, London, when it was reopened on Nov. 14, 1950.

because the year opened in a manner to suggest that something very different was in store. In the eight days from Jan. 18 to Jan 26 three plays by Christopher Fry (*q.v.*) were produced and acclaimed. These were *Venus Observed* (St. James, Jan. 18), *The Boy with a Cart* (Lyric, Hammersmith, Jan. 19) and *Ring Round the Moon*, a translation by Fry from the French of Jean Anouilh (Globe, Jan. 26). Fry had had a fair success in 1949 with his first full-length play, *The Lady's Not for Burning*, and his emergence as a popular as well as a distinguished author spoke as well for the public's taste as for his talent. On May 3 the arrival of T. S. Eliot's *The Cocktail Party* at the New theatre, and its immediate success, added to the impression that 1950 was to be a year of sustained brilliance. Essentially, however, *The Cocktail Party* belonged to 1949 and nothing of similar quality arrived to keep up the standard.

The established dramatists on the whole wrote much below their best. Exceptions to this rule were Emlyn Williams with *Accolade* (Aldwych, Sept. 7) and Benn Levy with *Return to Tyassi* (Duke of York's, Nov. 29); while Frederick Lonsdale, breaking a silence of some years with *The Way Things Go* (Phoenix, March 2), adapted his style to the changed times with much ingenuity. But Noel Coward was unsuccessful with *Ace of Clubs* (Cambridge, July 7) and Terence Rattigan's *Who is Sylvia?* (Criterion, Oct. 24) was a surprisingly tame light comedy from an author who seldom went wrong in this field. Esther McCracken in *Cry Liberty* (Vaudeville, April 21) had an experience unusual for her: a play intended as a frolic became in action a diatribe against government interference and seemed to have a political bias. A luckier experience befell Val Gielgud with *Party Manners* (Princes, Oct. 31) for the mild political bias in a negligible little comedy excited a storm which blew the play into notoriety; without this help it would probably not have been staged in the West End at all.

The record of the less known, or unknown, dramatists was comparatively good. One of the year's most attractive and moving comedies was Wynyard Browne's *The Holly and the Ivy* which was brought to the Lyric, Hammersmith (March 28) after a discouraging trial trip in the provinces and was instantly greeted as an almost certain success in the West End. Transferred promptly to the Duchess it fulfilled this prophecy and ran well for the remainder of the year. It was a piece in the best realistic convention, dealing honestly and plausibly with domestic relations between a clergyman and his three children in a country vicarage and basing its action solidly on well-observed character. Denis Cannan with *Captain Carvallo* (St. James', Aug. 10) also made a very good impression. His play had wit and an air of distinction, and its only major fault was an uncertainty of mood which sometimes varied disconcertingly between seriousness and the reverse.

In this category also must be placed the surprising name of Tyrone Guthrie who after years of distinguished work in reducing chaos to order in the direction of other people's plays now set himself a producer's problem in *Top of the Ladder* (St. James', Oct. 12). In this play Guthrie required of his chief actor an ability to switch from youth to middle age and back at a moment's notice and without the aid of makeup. By a *tour de force* of acting John Mills solved this difficult problem but it was felt that Guthrie the dramatist was not yet in the same class with Guthrie the producer. Hugh Hastings scored a deserved success with his *Seagulls over Sorrento* (Apollo, June 14) a very plausibly written piece with an all-male cast, the characters being a naval detachment busy on experimental work on a lonely northern island. Dorothy and Campbell Christie may perhaps be considered old hands, but their output of plays, though efficient, has not been large. Their piece *His Excellency* (Princes, May 23) which dealt with the troubles of a trade unionist appointed by a Labour government to the governorship of a thinly disguised Malta was plausibly and good-temperedly written and was well received by the public.

The list of revivals during the year revealed the important

fact that Sir Arthur Pinero was returning to public favour. One of the most successful productions of 1950 was *The Second Mrs. Tanqueray* (Haymarket, Aug. 29). This play, once reckoned a masterpiece, had not been given a serious production since 1922 when it was still thought modern enough to be played in contemporary clothes and settings. The conventional morality of the 1890s consorted so ill with the free manners of the 1920s that the play failed. As it was safely out of date it could be seen in 1950 in perspective and played in period with the result that its author's theatrical genius could once more be recognized and respected. Another Pinero play, *Preserving Mr. Panmure* (Arts, Nov. 15), showed how the action of time can turn a poor play into an acceptable one. When it was first produced in 1911 this comedy was felt to be exaggerated and overdone and it failed for that reason. In 1950 the exaggeration seemed no more than a legitimate satire on foibles of the time. The play could never rank among Pinero's best but it had his impeccable workmanship and held the stage well. A Somerset Maugham piece of a slightly later vintage, *Home and Beauty* (Arts, Aug. 31) had a somewhat similar impact upon its new public. It was written just after World War I as little more than a topical skit and could never have been revived on its merits, but it had so great a success of curiosity that it was transferred later in the autumn to St. Martin's for a run.

Importations from abroad during the year were less impressive than of late though Jean Anouilh was represented both by *Ring Round the Moon* which was one of London's outstanding successes and by *Point of Departure* (Lyric, Hammersmith, Nov. 1) which excited great interest. New York successes brought over were only three in number. *Mister Roberts* by Thomas Heggen and Joshua Logan (Coliseum, July 19) was a tough picture of life on an auxiliary naval vessel full of mutinous and sex-starved young men under a brutal commanding officer. It was produced in London with an elaboration greater than that of the New York original and drew crowds of playgoers. Sidney Kingsley's *Detective Story* (Princes, March 22), equally realistic about a New York police station, was less fortunate and soon failed. *Carousel* (Theatre Royal, Drury Lane, June 7) inherited the place and something of the popularity of the triumphant *Oklahoma*.

At the Edinburgh festival of 1950 the authorities took the step previously enjoined upon them in many quarters of encouraging Scotland's own dramatists. James Bridie and Eric Linklater were invited to supply a play each. Bridie responded with *The Queen's Comedy* (Aug. 21) based on an incident in Homer's Iliad but expressed in terms of modern warfare with the gods of Olympus at their ancient games of interference and undue influence. Much of the play was obvious fooling but its last scenes rose to a climax worthy of its author's best vein. Linklater's contribution was *The Atom Doctor* (Aug. 24) a well worked-out story of a charlatan and his dupes in an Edinburgh setting. The central idea and much of the working-out were reminiscent of Molière and the play had an obvious artistic as well as commercial value. Nevertheless its author came heavily under criticism locally for having lowered the dignity of the festival. (W. A. D.)

France. The French theatre in 1950 may be said to have presented an almost faithful reflection of certain economic and social features that characterized the life of the nation itself. Thus the few plays to surmount the increasingly acute material difficulties that beset not only producers but the greater part of the population were, almost without exception, those depicting situations and *milieux* that could be counted on to divert and be acceptable to the only public sufficiently well-off to constitute a profitable audience. Marcel Aymé's rather heavily whimsical farce, *Clérambard*, Henri Bernstein's annual sex-play, *Victor*, Jean Anouilh's corrupt *La Répétition ou l'Amour puni*, André Roussin's three-cornered bedroom comedy, *Nina*, Henry de Montherlant's perverse if well-written plays, *Celles qu'on prend dans ses bras* and *Malatesta* and François Mauriac's morbid *Le Feu sur la terre* might all be said to fall within this category. A marked tendency to stress personalities, *mise en scene* and expensive detail, rather than the quality of the work being played, was another concession to the taste of this public.

Not that there were not some creditable attempts on the part of producers to experiment with new works and new forms that were almost certain to attract only a limited audience. Armand Salacrou's *Si Dieu le savait* (a tale of love in the ruins of Le Havre), Roger Vailland's *Héloise et Abélard*, André Obey's *L'Homme de Cendres* (Don Juan) and Albert Camus' *Les Justes* (a dramatization of a trial that took place during the Russian revolution of 1905) came under this heading. There were also Arthur Adamov's attempts to dramatize the purely psychological theme of persecution in two plays entitled *L'Invasion* and *La Grande et la petite manoeuvre* which, although not entirely convincing, must nevertheless be mentioned for the quality of the effort they represented.

The hitherto obscure 60-year-old Flemish playwright, Michel de Ghelderode, whose brilliant if obscene anti-clerical plays, *Hop Signor* and *Fastes d'enfer*, were presented by the emerging " Myrmidon " company, was considered by some to be the real discovery of the season.

Among the newcomers, critics agreed that Jean Mogin's *A Chacun selon sa faim* had well deserved the award of " Aid to the First Play " offered each year by the Ministry of Education. In addition, the annual government-sponsored Concours des Jeunes Compagnies turned a brief spotlight on nine meritorious groups, drawn from both Paris and the provinces, that gave real promise for the future. Here as generally, however, there was disappointment over the scarcity of good new plays and the significantly large number of revivals and translations presented.

Out of every twenty revivals, the most distinguished was undoubtedly Louis Jouvet's re-creation of *Tartuffe*, with settings by the painter Georges Braque which, because of its sharp break with certain of the accepted Molière traditions, stirred up considerable controversy. Of the translations, a new presentation of *The Winter's Tale* at the Comédie Française, Jean Cocteau's production of *A Streetcar named Desire* by Tennesee Williams and an intelligent production of August Strindberg's *Spook Sonata* may be singled out from a list that included, in addition, translations from the Polish, Russian, German and Italian. International exchanges were furthered through tours abroad made by the Louis Jouvet, Jean-Louis Barrault and Jean Marais companies, and through visits to Paris of such foreign troupes as the Piccolo Teatro di Milano, the National Theatre of Israel and the London University Dramatic society.

The death of Jacques Copeau, followed by that of Charles Dullin, left Louis Jouvet, Jean-Louis Barrault and Madeleine Renaud undisputed masters of the French dramatic scene. However, a few younger men and women—Jean Vilar, Georges Vitaly, Yves Robert, Raymond Hermantier, André Reybaz and Catherine Toth—were steadily gaining favour both as actors and directors. Jean-Denis Malclès, Léon Gischia and Lila de Nobile designed a number of highly-acclaimed *décors*. (M. JOL.)

United States. In 1950 there were few new plays of merit by U.S. dramatists and during the autumn the American theatre depended largely on imports from England. Even the musical comedy stage yielded nothing to compare with such inspired efforts of previous years as *Oklahoma*, *Carousel*, *Brigadoon* and *South Pacific*.

The Drama Critics' circle—for want of anything better—

selected *Member of the Wedding* by Carson McCullers as the best play of the year. This was Miss McCullers' dramatization of her own novel of a lonely childhood in the southlands. As dramatic writing it was ineffectual, but there were helpful performances by Julie Harris as the unhappy adolescent, by Ethel Waters as her Negro nurse and by Brandon De Wilde as her little brother. *Come Back, Little Sheba*—written by William Inge, a former dramatic critic from St. Louis, and produced by the Theatre guild—appeared to be a play of considerable promise. In his telling of a rather banal tale (the decline of a drunkard who is unable to accept his intolerable home life) Inge displayed his talent for both dialogue and characterization and his play was admirably acted by Sidney Blackmer and Shirley Booth.

T. S. Eliot's *The Cocktail Party* achieved greater success in New York than it did in London. A strange mixture of advanced poetry, psychiatry and obscure religious philosophy, it was dramatically little more than a sophisticated rewriting of *The Passing of the Third Floor Back*. Brilliantly acted by Alec Guinness as the mysterious psychoanalyst who knows all of life's secrets and by a British company, it found responsive audiences and ran through the entire year.

Two established U.S. playwrights, Clifford Odets and Samson Raphaelson, returned from Hollywood with new plays. The Odets play—one of his best—*The Country Girl*, a realistic picture of backstage life and the career of a drunken actor, was further distinguished by the performances of Paul Kelly as the fading Thespian and Uta Hagen as his long-suffering wife. *Hilda Crane* by Samuel Raphaelson concerned a career woman whose turbulent life ends in suicide. Jessica Tandy, the original Blanche Du Bois of *A Streetcar Named Desire*, played the similar leading role with moving power.

On the lighter side were Wolcott Gibbs's comedy of daily life at a Fire Island summer resort, *Season in the Sun*, a diverting piece of fooling; Louis Verneuil's *Affairs of State* which dealt with love affairs in Washington; Rex Harrison and Lilli Palmer in John van Druten's *Bell, Book and Candle*, a comedy of a publisher's encounter with a witch; and *The Happy Time* by Samuel Taylor, a homespun comedy-farce of French-Canadian family life in the 1920s.

In *The Wisteria Trees* Joshua Logan attempted to rearrange Chekov's *The Cherry Orchard* for Helen Hayes by transplanting the Russian countryside household to Louisiana, but met with only moderate success despite the excellent acting of Miss Hayes. Maurice Valency's adaptation of Jean Giraudoux's *Intermezzo* (re-named *The Enchanted*) was a quick failure, while William Archibald's *The Innocents* (based on Henry James' *The Turn of the Screw*) lingered for several months.

After September the English invasion began. Dame Edith Evans' performance in James Bridie's *Daphne Laureola* won critical praise but not public support. Flora Robson in a psychological drama, *Black Chiffon*, apparently pleased the majority. Aldous Huxley's own dramatization of *The Gioconda Smile* survived only six weeks and *The Day After Tomorrow* (London title, *The Way Things Go*), a typical Lonsdale drawing-room comedy, was quickly withdrawn.

John Gielgud and Pamela Brown brought Christopher Fry's fine poetic comedy of witchcraft in 15th-century England—*The Lady's Not for Burning*—to Broadway and introduced an important new British playwright to U.S. audiences. Some weeks later Fry's adaptation of Jean Anouilh's *Ring Round the Moon* again proved Fry's wit and skill as a dramatist.

Among the revivals that prospered were Sir James Barrie's *Peter Pan* with Jean Arthur as the boy who never grew up and Boris Karloff as Captain Hook; Maurice Evans and Dennis King in Shaw's *The Devil's Disciple*; Estelle Winwood in another Shaw play, *Mrs. Warren's Profession*; Katharine Hepburn in *As You Like It*; and Cyril Ritchard in Sir John Vanbrugh's rowdy Restoration comedy, *The Relapse*.

Gian-Carlo Menotti's *The Consul*, though actually a grand opera was offered as a "dramatic musical" on Broadway. A desperate tragedy of lives destroyed by fascism, it towered above the usual theatre fare both dramatically and musically and was superbly sung by Patricia Neways and Marie Powers. There were many musical comedies, the majority deficient in both music and comedy. Among the most popular were Ethel Merman in Irving Berlin's *Call Me Madame*, a burlesque of an American lady ambassador's adventures in foreign court circles; *Tickets, Please* with the Hartmans; *Pardon Our French* with Olson and Johnson; *Michael Todd's Peep Show* and *Guys and Dolls*, based on some Damon Runyon stories. (T. Q. C.)

THEOLOGY. The two main currents of modern theological literature remained clearly discernible in the work of 1950: on the one hand the sharpened sense of the importance of history and of the problems that gather round the conception of time; and on the other the reaffirmation of the Bible as the ultimate norm of Christian truth.

History and Time. Christianity has always claimed to be a historical religion, and the significance of history has never been very remote from its interest; but two great world wars and the suffering, frustration and destruction consequent on them greatly accentuated that native concern, for they brought to the fore a problem of theodicy of the first magnitude.

To that major secular fact was to be added one of equal importance within Christendom itself. Of recent years the non-Roman churches within Christendom had been confronting one another in the World Council of Churches, where, since the differences between them were in many cases largely of historical origin, they were compelled to face the question of the meaning of history. The factor was in turn accentuated because all the churches together faced a world which over large areas of life, finds its springs of action and its hierarchy of values in a dynamic, atheistic humanism.

The nature of the opposition with which Christendom was faced was very ably dealt with by Père Henri de Lubac, S.J., in *The Drama of Atheistic Humanism* (London, 1950); the second factor remained a matter for discussion in the Faith and Order commissions of the World Council of Churches. Four books, however, Reinhold Niebuhr's *Faith and History* (London, 1949), Paul Tillich's *The Shaking of the Foundations* (London, 1949) and *The Protestant Era* (Chicago 1949) and O. Cullmann's *Christus und die Zeit* (Zürich, 1950) grappled in their several ways with the question of time and history.

All three writers employed the same working hypotheses, which stemmed from the same axiom; viz., that the true nature of man, the world and history is to be found in the Bible and is revealed to faith. Man is finite and involved in the events of natural history, yet he transcends them and lives in a world which moves steadily forward to the fulfilment of a universal destiny willed by God. That destiny is revealed in the Bible in terms of the divine sovereignty over all peoples.

History therefore is revealed in the Bible as the working-out of a divinely willed destiny, and this involves judgment, redemption and fulfilment. Its essential nature can be seen in the incarnate, crucified and risen Son of God, in whom the judgment of this world was declared, its redemption accomplished and its fulfilment achieved in principle. Hence Christians and the church live between the remembered fact of Christ and the expected event of His final triumph, and both human life today and the church are eschatological realities. Of special importance is the use of the word καιρός

(the moment or point of time as opposed to its successiveness), which Tillich emphasized. For the Bible, the important thing about time is its content. It is " filled " time, and in so much as the content of any moment of time may be an encounter with God, the really significant " times " are the moments when God and man encounter each other. Hence arises the decisive importance of the " mighty acts of God " in which God has met man.

With the factual side of the contribution which Christianity has actually made to the civilization of the west Christopher Dawson dealt adequately in his Hibbert lectures, *Religion and the Rise of Western Culture* (London, 1950), a carefully documented survey indicating both the extent and the limitations of Christianity's success in the attempt to leaven secular society. The outstanding event in dogmatics proper was the publishing of the first volume of Emil Brunner's *Dogmatics* (London, 1949). To Christian philosophy Canon E. W. Mascall contributed *Existence and Analogy* (London, 1950), which developed the neo-Thomism of his early volume, *He Who Is*.

The Reaffirmation of the Bible. Not only in the realm of history but in every other field also theology to-day goes back to the Bible as its ultimate standard of truth: ultimate truth as a Christian understands it is revealed truth and it is made known only to faith. But while the whole Bible and not the New Testament alone is regarded as the norm, the acceptance of the Bible is not held to invalidate the conclusions either of biblical criticism or of scientific discovery: it is the Bible as made known to us after the most rigorous principles of historical criticism have been applied that is accepted as containing the Word of God. The outcome of this closer study of the Bible has been to show the essential unity of the Old and New Testaments, which show a common understanding of history and a common " pattern." Each speaks of " a people of God "—the Jewish nation and the church—as redeemed and redeeming communities; each was chosen by God of His own grace; each was saved by God; each was a people in covenant with God; and each was called to the task of proclaiming, at once by word of mouth and in its own organized life, the will and design of God for the world. That discovery of the church, the people of God, as a theme common to the whole Bible, is one of the marked gains of modern biblical scholarship. The church is part of God's design in history and is therefore in some sense a part of the gospel which it bears.

Further cause for satisfaction in the field of scholarship in 1950 was the continuation of Walter Bauer's *Wörterbuch zum Neuen Testament* (indispensable to any New Testament study) and of G. Friedrich's work on G. Kittel's monumental *Theologisches Wörterbuch zum Neuen Testament*. It was decided moreover to continue Dom Henri Leclerc's *Dictionnaire d' archéologie chrétienne*. The third and fourth volumes of J. Peterson's *Israel; its Life and Culture* (Oxford, 1950) proved it to be the best scholarly background to biblical study, and W. Davies' *Paul and Rabbinic Judaism* (London, 1949) was a notable contribution at the point where Christianity and Judaism overlap.

For the New Testament, M. Black's *An Aramaic Approach to the Gospels and Acts* (Oxford) calls for special mention. T. W. Manson and C. J. Wright published their contributions to *The Mission and Message of Jesus* as separate volumes under the titles of *The Sayings of Jesus* (London, 1949) and *Jesus, the Revelation of God* (London, 1950) respectively; the latter volume, dealing with St. John's Gospel, was carefully worked over and expanded. Volumes on Matthew and Mark appeared in the new commentary on the Greek text of the New Testament, edited by S. C. Legg (Cambridge). C. K. Barrett began to fill a marked gap in modern theology with *The Holy Spirit in the Gospel Tradition* (London, 1950). Attention should also be drawn to Cyrus H. Gordon's *Ugaritic Handbook* (Rome, 1950), dealing with the Ras Shamra manuscripts; and to *The Isaiah Manuscript and the Habakkuk Commentary*, constituting vol. 1 of *The Dead Sea Scrolls of St. Mark's Monastery*, issued by the American Schools of Oriental Research (New Haven, Connecticut, 1950).

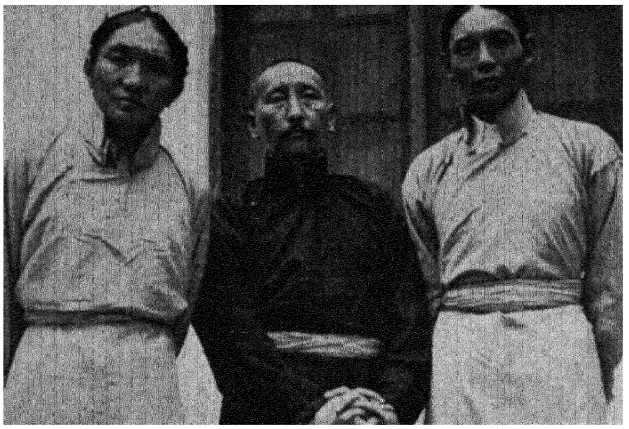
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(B. C. PT.)

TIBET. Country of central Asia, lying north and north-east of the Himalayas, mainly a high tableland. Nominally a Chinese dependency, it had been in practice independent and was the only country in the world entirely under the control of priests. Area: *c.* 469,294 sq.mi. Pop. (no census ever taken, 1948 est.): *c.* 3,000,000, one-fifth of the male population being monks. Capital: Lhasa. Language: Tibetan. Religion: Buddhist. Ruler, Ling-Erh-La-Mu-Fan-Kha (formerly Lhamo Dhondup), the 14th dalai lama, born June 6, 1935, and enthroned in the Potala, or chief palace, on Feb. 13, 1940.

History. From the beginning of the year the Tibetan authorities became aware of the frequency with which the Chinese Communist government was following the example of its predecessors by asserting its suzerainty over Tibet and its intention to " liberate Tibet by force." A Tibetan delegation set out to endeavour to get in touch with representatives of the Chinese government, but their first intention, apparently, was to hold a meeting in Hong Kong. Their request for visitors' visas was not granted by the Hong Kong authorities, who not unnaturally did not consider such a meeting in British territory desirable. As it was suggested that a better course would be to meet the new Chinese representative at Delhi the matter was left there, but the Hong Kong government at no time was unwilling to give the Tibetan delegation a transit visa to enable them to get to Peking.

However, the Chinese government evidently intended to do more than proclaim its suzerainty, for in August Jawaharlal Nehru, prime minister of India, stated that the Indian ambassador in Peking had informally pointed out to the Chinese government the desirability of settling the Tibetan question peacefully. In October the Ministry of External Affairs at Delhi stated that the Tibetan government had asked India's help in settling the dispute arising from the Chinese invasion. Meanwhile the Indian government had forcefully pointed out to the Chinese government its deep regret that the Chinese should have decided to seek a solution of the Tibetan question by force. Peking replied that no foreign interference would be tolerated as Tibet was a domestic Chinese problem. Conflicting information regarding the progress of the Chinese troops continued to come in, but it appeared that they had not gone much beyond Chamdo in eastern Tibet, where they captured a Tibetan member of the



The leaders of the Tibetan government delegation which was in India in 1950.

Kashag, or council of ministers, which assists the Dalai Lama.

On Nov. 17 the Tibetans took the important step of investing with full powers the 15-year-old Dalai Lama. This investment came as a surprise, for usually the Dalai Lama does not come of age until he reaches 18 years. Apart from the fact that the regent, Taktra Timpoche, was feeling the burden of office heavy on his somewhat feeble 70-year-old frame, the decision was obviously intended to brace the Tibetan people for resistance to the Chinese, as the news that the Dalai Lama had assumed full powers would be heartening to so devout a nation.

It was always admitted that a regency rule was lacking in appeal to the Tibetans, and the Dalai Lama, whose personal abilities turned out to be of exceptional quality, should be able to give his countrymen great heart in their present difficulties. This was all the more important because the Chinese government, again following the example of its predecessor, was believed to be endeavouring to put in the 13-year-old Panchen Lama as a substitute for the Dalai Lama at the head of Tibet. This would not be acceptable to the Tibetans as a whole. The Panchen Lama was admittedly the reincarnation of the highest spiritual authority in Tibet, and he had a minor temporal responsibility for the province in which his monastery was situated at Shigatse. But the Dalai Lama not only had spiritual functions of great importance and only second to those of the Panchen Lama, but he had been possessed of the temporal power ever since the 17th century. It should be admitted that there was frequently a certain amount of friction between the two grand lamas and their followers, but broadly the pre-eminence of the Dalai Lama in secular matters was unquestionable, and as the present Dalai Lama was fully invested and was two years older than the Panchen Lama he was expected to be in a good position to refute Chinese pretensions.

Tibet appealed to the United Nations, and the United Kingdom gave its full support to the stand which was taken by India in its further note to the Chinese government on Oct. 31, when it made it clear that India had no political or territorial ambitions in Tibet and sought no privileged position for itself or nationals in that country. After discussing the legitimate Tibetan claims to autonomy within the framework of Chinese suzerainty the Indian note pointed out that there was no allegation of provocation on the part of the Tibetans, hence there was no justification for the military operations against them. India, therefore, was no longer able to advise the Tibetan delegation to proceed to Peking unless the Chinese troops were halted and the chance given for peaceful negotiations. (E. HD.)

See Amaury de Riencourt, *Lost World: Tibet, Key to Asia* (London, 1950).

TIMBER. The devaluation of sterling in the autumn of 1949 had the effect of a general hardening of prices in the timber trade. Swedish and Finnish shippers at the beginning of 1950 raised their prices for deals, battens and boards for first open water shipment by £5 a standard. Though British timber control failed to negotiate any substantial contracts with these two countries, shippers held their own by selling substantial quantities to Dutch, Belgian and other European importers. By midsummer the price of good Swedish joinery deals had risen to £55 10s. a standard; subsequently small contracts were negotiated for the U.K. at these ruling prices.

In June a British government buying mission visited Moscow, and contracts were signed for 100,000 to 150,000 standards of softwoods, including goods from Archangel and the Kara sea. A considerable softwood contract with Yugoslavia, comprising 100,000 standards was signed by the British Board of Trade in March at prices showing some small advances over those of the previous year. France exported a large quantity of maritime pine from forests in the Landes damaged by fire in the torrid summer of 1949. Production of softwoods was everywhere maintained. Large quantities were still being used for internal reconstruction. Canada maintained her lumber industry in full production, most notably in British Columbia; in eastern Canada hardwood and spruce mills worked at full capacity, a large portion of the production being exported to the United States. Contracts were negotiated by the British Timber control with exporters in eastern Canada and British Columbia. Stocks of imported softwood in Great Britain at the end of July stood at 175,000 standards. Perhaps for this reason the Board of Trade announced in Oct. 1950 that licences to private buyers to import into Great Britain would be freely granted for Sweden, Finland, Norway, France, Brazil, etc., but that for the time being government buying would continue in the dollar countries, the U.S.S.R. and its satellites and Yugoslavia.

Meanwhile, at the beginning of the year the Board of Trade had granted freedom to private importers to purchase and import hardwoods from all countries except the United States and Canada. For these two countries licences were granted to private importers on a severely restricted scale. In the spring of 1950 a contract was negotiated between a number of British importers and Yugoslavia for 50 million board ft. of beech and 12 million board ft. of oak; prices averaged from 10% to 15% more than those of 1949. Czechoslovakia and Austria exported small quantities of hardwoods. A feature of the European hardwood trade was the very large export from France, principally of oak, beech and poplar: the grand total was in excess of 75 million board ft. The customary standing timber sales were held in the autumn, and prices paid were considerably more than in 1949. The French government then prohibited all further exports until the position had been reviewed. There was some falling-off in the demand for West African mahogany in the early months, with a consequent easing of prices; since then, however, the rearmament programme brought U.S. buyers in once more, with resultant firmer prices. Disturbed conditions in Burma prevented the teak trade in that country from resuming its former activities, but small shipments came forward from time to time at greatly enhanced prices. Australia produced large quantities of hardwood, principally for home consumption; there was a small export of jarrah, karri and Tasmanian oak to Great Britain. A quantity of hardwoods was exported to Great Britain from South American countries, principally Brazil and Chile, largely on a barter basis which enabled both buyers and sellers to obtain more satisfactory terms. For the first time since World War II a small quantity of Japanese oak lumber was exported to Great Britain.

During 1950 the Forestry commission limited the home grown trade in Great Britain to a total felling of timber of all species of approximately 300 million board ft. This curtailment brought about a considerable rise in prices of both standing timber and lumber.

Plywood production was well maintained, with a general rise in prices due mainly to the devaluation of currencies; the U.S.S.R., Finland and Sweden all maintained their exports. A considerable number of mills for plywood had in recent years been established in tropical Africa and were now beginning production. Mills in British Columbia and eastern Canada were in full production in 1950, as the rising home market and the large export to the U.S. and Great Britain enabled manufacturers to dispose of their products satisfactorily. (B. L.)

United States. The total timber production for 1950 was about 37,000 million board ft., a considerable increase over the production of 1949 and other years since World War II. This high production was caused by the great demand for housing throughout the country. Of the total timber production, about 27% was of hardwoods and 73% softwoods. During recent years there had been an increase in the proportion of hardwoods over softwoods. Probably the greatest percentage increase of any one species was that of ponderosa pine which is grown and produced as timber in 12 of the western states. It is the most widely distributed conifer in North America. Timber prices during 1950 reached record heights, exceeding the outstanding records of 1920.

There was a sharp increase in the volume of timber imported during the year, but exports decreased because of tariff differentials and a smaller volume of shipments under the Economic Co-operation administration. The principal species among the softwoods exported continued to be Douglas fir from the west coast, followed in order of importance by southern pine from the gulf and southeastern states and ponderosa pine from the west coast states. Oak was the outstanding hardwood species exported. The United Kingdom, the far east, Australia and Cuba were the most important countries of destination for the U.S. timber export. (*See* also FORESTRY.) (N. C. B.)

TIMOR: *see* INDONESIA; PORTUGUESE COLONIAL EMPIRE.

TITO: *see* BROZ (TITO), JOSIP.

TOBACCO. The world's tobacco harvest for the year 1950 was approximately 3% below that of 1948-49. The total from all sources except the U.S.S.R. was 7,200 million lb. as against the previous year's total of 7,453 million. Production in 1949-50 in Canada, Cuba, Greece, Southern Rhodesia, Turkey and a number of other countries was well above that of 1948-49. But increases in these areas were outweighed by a sharp decline in China and moderate declines in several other important tobacco-growing countries.

The 1949-50 production of flue-cured tobacco, the principal type entering world trade, was about 4% below the 1948-49 out-turn. But the reduction of the Chinese flue-cured crop by more than 50% of the previous year's total was partly offset by increases in Canada, the United States, Korea and the southern African countries. In the case of oriental or Turkish-type tobacco, 1949-50 production was well above the 1948-49 crop. The 1949-50 harvests in Greece, Turkey and Yugoslavia were substantially more than the previous ones. Increases in production of oriental-type leaf were also reported for the countries of southern Africa and certain other minor producing areas. Some decline in production was reported for Bulgaria and Italy.

World production of light air-cured types of tobacco, an important portion of total production in many countries, was slightly below the 1948-49 output.

AVERAGE VALUE OF UNSTRIPPED LEAF TOBACCO IMPORTED INTO THE UNITED KINGDOM, 1938-49
(pence per lb. exclusive of duty)

	1938	1946	1947	1948	1949
Southern Rhodesia	14·7	40·9	47·6	43·9	46·7
Canada	17·6	28·7	33·2	32·7	37·4
Nyasaland	11·6	25·3	28·2	33·9	36·7
India	10·3	15·1	17·2	21·9	23·3
U.S.A.	15·8	36·7	35·8	34·0	41·2
Turkey	17·5	63·8	54·4	33·9	39·1

SOURCE: *Tobacco Intelligence*, Commonwealth Economic Committee.

Production of dark types other than cigar leaf was somewhat lower than before. The production of cigar types exceeded that of 1948-49, as a result of larger crops in Cuba, Indonesia and the Philippine republic. Cigar consumption in the United Kingdom declined by approximately 10%.

One important feature of the year was the surpassing of the leaf production-figure set by Southern Rhodesia: this was expected to amount to 105 million lb. in 1951 but this figure was exceeded in 1950, and the crop for 1951 was thereafter officially expected to exceed 125 million lb. If this expansion-rate was to be maintained the target of 140 million lb. set for 1954 would be surpassed in 1952. The question therefore arose whether British manufacturers, who had undertaken to purchase two-thirds of the crop if Rhodesia expanded production to the level indicated, would still be prepared to purchase the same proportion of the increased crop. A delegation from Southern Rhodesia came to London to settle this point with the Board of Trade and the manufacturers; and an agreement was reached whereby British manufacturers undertook to buy 485 million lb. (green weight) of flue-cured Virginia tobacco in the six-year period ending with 1956. Provided that the amounts did not exceed two-thirds of each year's total crop, British manufacturers would buy 75 million lb. in 1951, 80 million in 1952, 85 million in 1953 and 1954 and 80 million in 1955 and 1956.

There was general world rise in the price of leaf, and in consequence the British Treasury granted British manufacturers an additional $10 million for the purchase of United States leaf to compensate for the rise. The allocation for American leaf now stood at $87·4 million instead of $77·4 million as previously. Price increases in the main producing countries from 1938 to 1949 are indicated in the table.

Despite increases in the price of leaf and the general cost of production, manufacturers refrained from putting up the price of cigarettes in the United Kingdom, although in October several announced a small increase of from 1*d.* to 1½*d.* in the retail price of pipe tobaccos.

Britain allotted $9 million to purchase tobacco from the 1950 Canadian crop, according to the board of directors of the Ontario Flue-cured Marketing association. This represented an increase of $1 million over the amount allotted in 1949, when between 15 million and 16 million lb. of flue-cured were exported to Britain. The increase meant that an additional 2 million lb. was available for Britain.

U.S. leaf production totalled approximately 1,930 million lb., as against the previous year's crop of 2,019 million. The reduction was mainly accounted for by a cut in planting of burley leaf. The flue-cured crop rose from 1,115 million lb. to 1,150 million.

The world's consumption of cigarettes continued to increase, and production rose accordingly. The U.S. production for the year ending with June 1950 was approximately 410,000 million, as against 390,000 million in 1949. Cigar consumption was slightly down at 5,450 million as against 5,700 million, and a campaign was organized to increase home consumption. Pipe tobacco in the U.S. was down to 106 million lb.

The steady decline in pipe-smoking since World War II induced the British National Union of Retail Tobacconists to join with the Briar Pipe Trade association and the tobacco

manufacturers to plan a campaign for 1951 to increase pipe-smoking in the United Kingdom. The decline in pipe-smoking was attributed partly to the high cost of smoking requisites, which deterred many of the younger generation from adopting it, and also to the increasing nervous tension created by modern conditions of living, for which the inhaling of nicotine in cigarette smoke was claimed to be a sedative. (G. WT.)

TOBAGO: *see* TRINIDAD AND TOBAGO.

TOGOLAND: *see* FRENCH WEST AFRICA; GOLD COAST; TRUST TERRITORIES.

TONGA: *see* PACIFIC ISLANDS, BRITISH.

TONGKING: *see* INDO-CHINA.

TOURIST INDUSTRY. The year 1950 was one of the best for tourist travel in Europe. The volume of traffic exceeded the average for a good year before 1939, but length of stay at individual resorts and indeed in many whole European countries fell. The hard-currency countries, notably Switzerland, suffered considerably as a result of the devaluation of sterling, which made their prices too high. Currency restrictions and visa formalities were further mitigated; and a considerable volume of modernization and new building was carried out by the hotel industry, financed largely by governments and in many cases with Marshall aid. Transport services were by 1950 perhaps better than before World War II; and the development of air traffic was marked. Many airlines on the trunk routes offered excursion rates on certain services. The Tourist committee of the Organization for European Economic Co-operation was active in securing governmental action towards the development of the tourist movement. Minimum standard customs concessions of great value to the individual traveller were introduced by all western European countries. The last vestiges of rationing affecting the tourist were disappearing, and many countries developed a system of giving special preference to the visitor in order to encourage maximum expenditure: Great Britain, for example, introduced a successful shopping scheme whereby tourists from overseas could buy goods in the shops without paying purchase tax.

Traffic from non-European countries to Europe showed a considerable expansion but was still small in volume, reaching a grand total barely more than 400,000. Visitors from the U.S. or of U.S. nationality numbered more than 300,000 and spent, including fare payments, $313 million in European countries. Expenditure by U.S. visitors had in latter years equalled 30% of the value of all European physical exports to the U.S. and been by far the largest item in balance of trade. The co-operative publicity campaign conducted by all European countries through the European Travel commission led to a satisfactory expansion in American traffic and spread it more evenly over the months of the year from spring to autumn: American travel to Britain in the first three months of the year, for example, was 60% greater than in 1949. The introduction by the airlines of excursion fares during the off-season months at single fare plus 10% did much to develop American travel, which increased by 25%. Two vessels, the "Georgic" and the "Stratheden," were transferred from routes in the southern hemisphere to the north Atlantic during the peak period, when traffic in the southern hemisphere under normal conditions is slack. Redistribution of transport in this fashion is of the utmost importance in securing efficient operation of present capacity and, eventually, reduced fares for the traveller.

A new feature of tourism was the development of travel from the lower income-groups by students and young people with a desire to do more than sightseeing, namely, to meet people, to see modern developments, industrial plants and institutions and to educate themselves.

British traffic abroad, amounting to well over 1¼ million (including travellers to Ireland), showed signs of slackening by comparison with previous years. Average individual expenditure was well below the £50 allowed and often amounted to little more than £30. France was the most popular country, with over 600,000 visitors; Ireland, Italy and Switzerland came next. In all, length of stay and expenditures by British people abroad tended to decline. The total volume of travel showed no increase on 1949. One significant feature of British traffic was the increase in the number of cars crossing the channel: the motoring organizations reported a rise of 50% in the number of British motorists taking their cars abroad; Ireland, France, northern Italy and Austria, where British visitors enjoyed a favourable exchange rate, were the most popular destinations. Expenditure by British visitors abroad in 1950 can be estimated roughly at £75 million, one-third of which was in Ireland. British earnings from the tourist trade in 1950 were provisionally estimated at £50 million (they exceeded £70 million if fares were included). Visitors numbered 600,000, 10% more than in 1949. Europe's tourist earnings from all countries reached a record figure equivalent to $1,250 million, excluding fares (15% better than in 1949), of which some $230 million was in U.S. currency. (*See* also HOLY YEAR.) (E. W. WE.)

TOWN AND COUNTRY PLANNING. During 1950 problems of urban and rural development received increasing attention in most countries. An opportunity to report progress and compare thought and action in this field was given in August by the 20th International Housing and Town Planning congress at Amsterdam, attended by planners and administrators from 23 countries. The reports showed that no simple generalizations could be made applicable to the world as a whole. Countries differed so widely in physical characteristics, economic structure, ways of living and political attitudes to land-use control, that a consensus of aims and methods was scarcely to be looked for. Yet it was clear that there were aspects of urban problems common to all countries that were industrialized or in process of industrialization, and that there was a growing homogeneity of approach in survey and research work. Since World War II comprehensive planning surveys had been initiated in many cities and regions, recording and mapping in considerable detail the basic facts of geology and topography, the existing uses of the land (for industry, agriculture, forestry, residence, recreation, social institutions and other purposes) the density of occupation, the age and character of buildings, the pattern and loading of communications, and the economic and demographic facts and trends. Together these surveys added up to a new geography, under constant revision, that was revolutionizing the text-books of that descriptive science. In some countries the surveys so far covered only selected cities and regions; in some they covered most of the urbanized areas. In the United Kingdom the surveys in progress under the planning act of 1947 extended to the whole surface of the country, and much further work was done on them in 1950 in preparation for their publication and submission to the Ministry of Town and Country Planning in 1951.

In most areas the planning surveys were coupled with at least tentative sketches of plans for future urban and rural development on lines considered desirable by the agencies administering the laws for land-use control or guidance. But while the surveys, as collections of factual data, showed a marked tendency to a common content, the laws relating to the public control of future land-use varied widely from country to country. The policies aimed at in applying such control differed more widely still. In the majority of countries in

western Europe, the U.S., South America and the Commonwealth, where private decisions by land owners or land developers remained the prevailing determinants in land-use, public control essayed only to correct the most conspicuous defects and disorders of urban and rural building. It sought to limit excessive exploitation of urban land where that would be seriously injurious to health or amenity by imposing standards of maximum density or of building height and coverage and of minimum road-widths and reservation of open space. It regulated the alignment of highways and other communications. It segregated conflicting types of land-use. In other words, it aimed at tidying up badly developed urban areas, and at preventing similar mistakes in new development. In general the public planning control, based in a study of existing spontaneous trends of building development, broadly accepted the given trends and endeavoured to avoid local disorder by setting limits on their character and density.

In a few countries, however, planning control now sought to go considerably further than this rationalization of observed trends. There was a growing consciousness of a need to guide the further growth of cities and of settlements in rural areas with a view to the promotion of more satisfactory community forms for economic, social or aesthetic reasons. The Amsterdam congress revealed that planners generally agreed that it was desirable to create, both in old and new developments, urban and rural district local neighbourhoods with a set of common facilities at convenient distances from a group of dwellings. In many countries there was active discussion of the desirable size of such residential neighbourhoods; the formulations varying between about 5,000 and 15,000 persons—a sufficient population for a local "centre" having a primary school, a group of shops, and an assortment of community buildings so placed as to promote some degree of neighbourhood consciousness.

Though this conception was entertained as a good objective in planning, it had not been widely applied in practice. It was obviously fairly easily applied in areas where large-scale housing projects were being constructed by public agencies or with public financial aid as for example in the Netherlands, Sweden, Denmark and the United Kingdom. It was even more easy to apply when larger areas of land under development were actually owned by the state or city authorities as in the countries of eastern Europe. This, however, was not technically town and country planning, but large-scale land development, in which public authorities could apply a considered design as great land-owners had applied it here and there in past ages. The two techniques tended to come together in some countries; as in Sweden, where there was a public planning system governing both public and private development, and where some cities owned very large areas of land; and as in Great Britain, where all the land was under planning control and also public authorities were empowered to acquire large areas of land for redevelopment, for housing and for new towns.

In most countries in 1950, as in preceding years, the urgency of the demand for housing was so intense and the grasp of public opinion on the wider issues of urban development so imperfect that a vast amount of sound social housing was accompanied by bad planning or no planning at all. Planners realized increasingly that it was necessary to limit both the outward growth of great cities and their internal density, and the idea of systematic dispersal of industry and population to smaller towns gained increasing support. But the political strength of planning was, in nearly all countries, much less than the political strength of the merely quantitative demand for more housing units. The need of a much clearer public understanding of the fundamental problems of city structure and growth, as a basis for intelligent guidance, was a recurrent theme of the Amsterdam congress.

Of western countries, the United Kingdom was acknowledged to possess the most comprehensive town and country planning powers and the most logical aims. Under the act of 1947 it was possible to control the regional placing of development as well as its local form, to limit the size and density of cities, to reserve adequate open spaces and to protect green belts and good farm land from building. Positive instruments for good town building also existed in the New Towns act and the provisions for redeveloping bombed districts. World interest was therefore focused on the British experiment and especially on the financial clauses of the 1947 act, which in principle enabled planning to redeem land from development, even on city fringes, without injustice to land-owners. It became clear in 1950, however, that the full success of the new British planning system had still to be demonstrated. Much depended on the public reception of the plans to be released all over the country in 1951. (F. J. Os.)

Canada. During 1950 the conference of the Community Planning association met in Ottawa, where a master plan for the capital city had been prepared. Reports were given on planning in Canadian cities. In March, the American Institute of Planners and the Canadian Institute of Professional Town Planners met at Niagara Falls, Ontario.

United States. The American Planning and Civic association met in Washington in May 1950, and the American Society of Planning Officials met in Los Angeles in August. During the year most of the larger cities were engaged in revising plans to meet new conditions. Philadelphia amended its zoning ordinance to eliminate mixed uses of land and to provide better facilities in industrial districts. The greatest stimulant to planning in the smaller cities came from the regulations requiring comprehensive plans as a preliminary to federal loans and grants from the Housing and Home Finance agency for urban redevelopment programmes.

U.S. cities continued to be preoccupied with traffic congestion. In November the Chamber of Commerce of the U.S. called a Businessmen's Conference on Urban Problems in which traffic, parking and urban re-development were discussed. In addition to many neighbourhood shopping centres two regional centres were established, Northgate near Seattle, Washington, and Crenshaw in Los Angeles. A report from the country club district of Kansas City, Missouri, described nine shopping centres designed to serve more than 100,000 residents. (*See* also HOUSING; LOCAL GOVERNMENT.) (H. Js.)

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TRADE UNIONS. International Movement. The world trade union movement continued in 1950 to be split between the Communist-led World Federation of Trade Unions (W.F.T.U.) and the International Confederation of Free Trade Unions (I.C.F.T.U.), of which the British and the U.S. unions formed the main nucleus. There was no substantial change during the year in the relative positions of the two bodies, except that the Chinese trade union movement was undergoing an extensive re-organization after the change of government in China and was in 1950 actively associated with the W.F.T.U., which also continued its efforts to secure the support of the growing trade union movements in Asia and in the African colonies, as well as in Latin America. In western Europe, the trade union movements connected with the W.F.T.U. continued to command the allegiance of the main bodies of manual workers in both France and Italy, whereas the Scandinavian countries, the Netherlands, Belgium and Switzerland were practically solidly

on the side of the I.C.F.T.U. At the inaugural congress of that body, in Nov.-Dec. 1949, it was decided to invite representatives of the Christian trade union movements which existed in a number of countries to join the new international. The French and Belgian Christian unions were actually represented, and subsequent negotiations with the International Federation of Christian Trade Unions took place for the discussion of future relations. The I.C.F.T.U. congress agreed to accept the affiliation of the Christian unions only on condition that, within two years, they " along with all other affiliated bodies, accept and give effect to the principle of affiliation to one Trade Union international." This condition proved to be unacceptable to the Christian international, and the future relations between the I.C.F.T.U. and the Christian unions remained uncertain.

One effect of the split in the international trade union movement was to alter the position of the trade secretariats, which were international federations of trade unions in particular industries or occupational groups. The secretariats, which were independent bodies, were holding aloof from the W.F.T.U. during 1948-49 as they saw a split coming and were not prepared to accept the subordination demanded of them by the leaders of the W.F.T.U. They formed a joint committee to watch the movement of events and to promote common action. During 1950 negotiations between this committee and the I.C.F.T.U. resulted in an agreement which left the trade secretariats autonomous but provided for reciprocal representation in a consultative capacity and for close joint working. The W.F.T.U. retaliated by forming in a number of industries rival federations, based on its own affiliated unions, but subject to central control by the W.F.T.U. itself, in accordance with the theory of " democratic centralism " which the Communist parties everywhere accepted. The W.F.T.U. held a conference of its " trade departments " in Budapest in May 1950 and made plans for using them for an attempt to persuade particular trade unions at present connected with the trade secretariats to secede and join the rival bodies.

The split further involved the problem of relations between the trade unions and the United Nations and its specialized agencies. The W.F.T.U. had been recognized by the U.N. as a consultative organization in relation to the Economic and Social council: the I.C.F.T.U. now received a similar recognition and decided to set up an office in Geneva for regular consultation with the I.L.O. The central office of the I.C.F.T.U. was in Brussels.

The I.C.F.T.U. congress of Nov.-Dec. 1949 instructed the executive to promote regional organizations among the affiliated movements but refrained at that stage from either defining the regions or laying down formal constitutional arrangements. It was decided to proceed tentatively area by area; and in pursuance of this policy a delegation was sent to southeast Asia in the summer of 1950 to investigate and report. It was also arranged to hold before the end of 1950 a regional conference of the trade unions of the western hemisphere and to consider the holding of a conference of the affiliated trade unions in Europe. The I.C.F.T.U. placed on record its uncompromising hostility towards the Franco regime in Spain, and also protested against the suppression of trade union rights in Argentina. It engaged in negotiations intended to further the re-establishment of free trade unions in Greece. It also set up a special committee to consider the problems of international collaboration between trade unions of salaried and professional workers within the framework of the general international.

During May 1950 the I.C.F.T.U. convened at Düsseldorf a special conference of interested bodies to consider the reorganization of the heavy industries of the Ruhr. This gathering recognized the right of the German government



Victor Feather (assistant secretary), H. L. Bullock (chairman) and Sir Vincent Tewson (general secretary).

to determine the future ownership of the Ruhr industries, but affirmed the interest of the trade unions in " a rational reorganization of the heavy industries of western Europe," and pronounced against any re-establishment of the Ruhr combines. It further demanded trade union representation on the Ruhr authority and on any future organization set up to replace it. The proposal to form an international authority to control European coal, iron and steel was supported. These decisions were not directly related to the Schuman plan; but the I.C.F.T.U. set up a special committee to consider the plan and to press for direct trade union representation in the event of its adoption. The I.C.F.T.U. decided that its committee should endeavour to secure united action by its affiliated national trade union movements in relation to the plan. A further meeting in October gave general approval to the Schuman plan, subject to the above conditions, with the British and Swedish delegations abstaining. (*See* also EUROPEAN COAL AND STEEL POOL.)

Not as part of I.C.F.T.U. but in close connection with it, the trade unions of the E.R.P. countries maintain a special committee to deal with matters arising out of Marshall aid. This committee convened a full conference of its associated bodies in Rome in April 1950, to consider a common trade union policy for the economic reconstruction of Europe and also the special problem of manpower and migration. The conference adopted a long declaration on European reconstruction. Stress was laid on the need for the general adoption by governments of concerted policies for ensuring full employment, and for the co-ordination of investment policies by governments, both in the interests of concerted planning and in order to avoid the re-appearance of private international cartels. The statement recognized the need for higher European production, based on improved techniques, and for the liberalization of trade and payments but insisted on the need for increased productivity to be accompanied by higher wages and lower prices. It urged European countries to restrict dollar purchases and expand dollar sales in order to close the dollar gap, but insisted on the need for a

continued flow of dollars to Europe and to the undeveloped areas as a necessary condition of European recovery. On the question of manpower and migration it favoured freer movement of workers across national frontiers, but emphasized the housing shortage as the chief practical obstacle in the way, and urged governments to make much greater efforts towards its solution. Finally, on the question of European unity, the conference made an emphatic declaration affirming the need for closer union and the necessity of taking the risks which it involves.

Great Britain. For the first time for a number of years the affiliated membership of the British Trades Union congress showed a slight fall—from 7,937,091 to 7,883,355. The greater part of the fall, which was not large enough to have much significance, was in the railway trade unions, where it was partly a consequence of staff reductions, and in the other transport and general workers' groups. There was also a small decline in the engineering group, whereas most others maintained or improved their position. The British unions reached a point at which considerable further increases in membership could not easily be achieved without invasion of new fields, and where fluctuations were largely the result of improved or slacker activity in collecting dues, or of greater or less promptitude in striking off members whose contributions were in arrears.

The principal question at issue during 1950 was that of the so-called wages freeze. In face of slowly rising costs of living, partly as a result of the devaluation of sterling, trade unionists were becoming steadily more restive at the acceptance by their leaders of the policy of limiting wage applications to cases of special hardship or to advances definitely linked to higher output. There were two distinct types of pressure for wage increases: the one for the concession of higher minima to the lowest-paid grades and the other for the maintenance or increase of the "differentials" for skilled workers who were not in a position to earn high piecework balances.

In Jan. 1950 the T.U.C. general council convened a special conference of trade union executives and laid before it a report on the economic situation, including wages policy. The report, while recognizing the special claims of low-paid workers, re-affirmed the need for general restraint in wage applications and called on the trade unions to follow a policy of holding wage rates stable until Jan. 1951, as long as the retail price index remained within the range of 118 and 106 (June 1947=100). At the same time, the report recommended the further extension of systems of payment by results. The conference was sharply divided, and the report was adopted by 4,263,000 votes against 3,606,000—a vote which was generally interpreted as a sign that wage restraint was breaking down. This view was confirmed by the voting on a resolution put forward to the annual Trades Union congress in Sept. 1950, proposing much less rigid limitations on wage demands. This resolution was rejected by a small majority, leaving the T.U.C. with no wage policy at all. In effect, this meant that the trade unions resumed their freedom, individually, to press for such wage advances as they thought fit; and the sequel was the adoption by a number of unions of new wage programmes. To a great extent, however, the policy of wage restraint had already broken down before it was formally rejected: a number of unions were already in the field with wage demands, and the T.U.C. had no power to bind its affiliated unions against their will.

The rejection of wage restraint did not mean that there was any immediate danger of widespread strikes for higher wages. Compulsory arbitration remained in force, in the sense that strike action was unlawful unless a dispute was previously reported to the Ministry of Labour and the minister failed to use his power to refer it to the National Arbitration tribunal or some other approved body. Most trade unions accepted the necessity of keeping the machinery of compulsory arbitration alive in view of the difficulties of the national economic situation. (*See* also WAGES AND HOURS.)



"Overcrowding on the Railways" by Low, which was published in the "Daily Herald" (London), March 1950.

The second main debate at the T.U.C. of 1950 dealt with the administration of the industries that had been nationalized since 1945. There was a good deal of discontent, especially on the railways, with the actual working of nationalization from the standpoint of workers' participation in control of administration and of the types of persons appointed to managerial positions. But this discontent was rather vague, and there were wide differences about what ought to be done. Some trade unions—especially the post office workers—stood for joint control by the employees and the representatives of the public interest; others—notably the railwaymen—demanded direct trade union representation on the administering boards; yet others preferred the existing system of boards nominated by the government without representation of particular interests but held that more men with trade union experience and more known supporters of nationalization should be among the government's nominees. This last was probably the opinion most widely held, as many trade union leaders were afraid of the consequences to the trade unions of accepting a share in the responsibility for the efficient conduct of industry, as potentially inconsistent with their main function of safeguarding their members' interests. The result of these divergencies of view at the T.U.C. was that the question was talked out without any clear expression of collective opinion.

The trade unions, however, were becoming aware that proper use could not be made of the development of joint consultation, either in the nationalized industries, where it was compulsory, or elsewhere, unless steps were taken to train their active members to take full advantage of it. The general council appointed a special officer to take charge of matters relating to productivity; and the report of the delegations sent to study this matter in the United States under the auspices of the Anglo-American Council on Industrial Productivity was having a considerable influence. The British unions were beginning to take up the question both of employing special officers to concern themselves with the technical aspects of production and of training their officials and workshop representatives to handle such matters and to make fuller use of joint consultation as an extension of the province of traditional collective bargaining. These developments had not yet gone far; but there had been a significant beginning, and the T.U.C. of 1950 showed an increasing awareness of the problems involved.

The activities of the Communist minority inside the trade unions, in face of the intensification of the "cold war," led to an increased desire to take what steps were practicable to counter "subversive movements" without limitations on trade union freedom. Communist strength was in the main concentrated in a few unions: it appeared to be greatest in the Electrical Trades union, the National Union of Foundry Workers, the Civil Service Clerical association and a few small unions of technicians. It was most manifest, however, in the docks section of the widespread Transport and General Workers' union, and this section, especially in London and Liverpool, was the chief centre of significant unofficial strike action during the past year. Communism was also strong in the leadership of the Scottish miners, but not in the National Mineworkers' union as a whole. Certain leaders, notably Arthur Deakin of the Transport and General Workers and George Isaacs, minister of labour, who had been secretary of one of the printing unions, were vehement in denunciation of Communist influence; and a few unions, including the Transport and General Workers' union, took action against unofficial leaders who violated trade union discipline. But most unions preferred to let matters alone, aware that the power of the Communist minority to make trouble was very limited. Indeed, in most unions the Communists were careful to avoid any direct challenge to the official leadership. Most trade unions, even if they disliked the wage freeze, were anxious not to make trouble for the government or to jeopardize economic recovery. This was shown when, in the summer of 1950, the unions attached to the Confederation of Engineering and Shipbuilding Trade unions, which included a fairly strong Communist or semi-Communist element, rejected on a ballot vote the proposal to strike for a wage advance and voted instead for reference to arbitration.

Another development of 1950 was the increased interest taken by the British movement in the growth of trade unions in the colonial areas. This was partly a consequence of the great attention paid by the Communist-led W.F.T.U. to the stimulation of economic as well as of political unrest in these areas. Communism had a natural attraction, because of its continual denunciation of economic imperialism, for the nascent trade union movements in the less advanced countries; and the colonial governments were endeavouring to steer the unions away from political agitation into purely economic activities. In general, the T.U.C. supported this policy: it sent missions to various colonies to help in trade union organization and usually tried to persuade the colonial unions to adopt patterns of organization based on the British, so as to keep industrial and political activities apart. The T.U.C. set up a special department, under a full-time officer, to handle these matters on its behalf.

Western Europe. In France, trade union events in 1950 turned chiefly on the question of wages and on the peace campaign conducted by the Communist party and the Communist-led Confédération Générale du Travail (C.G.T.) in opposition to the development of closer Franco-U.S. relations in connection with the North Atlantic treaty. The one-day general strike called by the C.G.T.-Force Ouvrière in Nov. 1949 was followed by prolonged negotiations on the wage issue, the trade unions pressing more and more for advances to meet the rising cost of living. When, in Aug. 1950, the government announced a new minimum wage scale the C.G.T. promptly rejected the concessions offered and denounced the Force Ouvrière and the Christian unions for refusing to join it in outright opposition. There was, however, an evident consciousness on the part of the C.G.T. that it was not at present strong enough to force matters to a crisis; and the situation throughout the year was one of continual manoeuvring for advantage.

In Western Germany, the trade union federation (Deutscher Gewerkschaftsbund für die Bundesrepublik Deutschland), formed in Oct. 1949 by the union of the seven federations previously in existence for the separate *Länder*, was extended in July 1950 to include the trade unions of West Berlin. The professional unions of West Berlin similarly linked up with the Professional Workers' federation of Western Germany. The highly centralized trade union organization set up in Eastern Germany had no connections at all with the west. The West German unions had not regained their full pre-Hitler strength; but they advanced considerably and were pressing hard for representation on the controlling agencies in the Ruhr and in German industry generally.

In Italy the Socialist Federazione Italiana del Lavoro, which broke away in 1949 from the Communist-controlled Confederazione Generale Italiana del Lavoro, decided early in 1950 to merge with the mainly Catholic Libera Confederazione Generale Italiana dei Lavoratori. The last-named had already shed its exclusively Christian basis. The merger left in existence the Socialist Unione Italiana del Lavoro, which applied for affiliation to the I.C.F.T.U.; but that body decided to make further inquiries and to await developments before deciding its attitude. The amalgamated L.C.G.I.L. was still under predominantly Catholic leadership; and the position was complicated by the uncertain relations between the I.C.F.T.U. and the Christian Trade Union international. (G. D. H. C.)

United States. Recovery from the business recession of 1948-49 and increased business activity resulting from the rearmament programme of the government changed the course of economic events in the United States during 1950 and the labour policies related to them. Hourly wage rates of factory employees, which for more than a year had stood at $1·40, began to move up again and in the last months of 1950 exceeded $1·50. Employment rose, unemployment declined and, after the outbreak of the Korean war in June, the revised foreign policies of the government added to a renewed postwar boom the powerful influences of expanded armament schedules and plans for increasing the country's armed forces. These developments strengthened the position of organized labour, caused its demands to increase and turned its attention to the problems of unions in a war economy.

Labour negotiations in the early part of 1950 were concerned mainly with the issue of old-age pensions and social insurance. In coal mining, the United Mine Workers continued to inspire stoppages and limit the number of days worked in its efforts to rehabilitate the miners' welfare and retirement fund. Intervention by the president, the appointment of a fact-finding board and the granting of an injunction failed to produce a settlement and peace. On March 5, as a result of negotiations between union and employers, an agreement was reached raising the employers' contribution to the retirement fund from 20 to 30 cents per ton of coal mined and increasing miners' wages by 70 cents a day.

The wage and pension agreement between General Motors and the Automobile workers, signed late in May, was the climax of the year's labour settlements. In addition to liberal pension and insurance benefits, the agreement provided for the automatic adjustment of wages to changes in living costs and granted an annual increase of 4 cents an hour, the so-called "improvement" factor, to enable employees to share in the gains from technological progress. The contract was to run for five years. The effects of the announcement of the contract were prompt and dramatic. The formula became the favourite method of wage settlement and two million employees were estimated to be working under it at the close of the year.

Although these agreements contributed to industrial peace, conditions continued to be disturbed in the railway industry.

In this industry public regulation of labour negotiation through the Railway Labour act appeared to cause labour relations to deteriorate. The railway unions were irked by the length of time it took for negotiations to reach a conclusion. The machinery of the law acted as an obstacle to direct discussion between employers and the unions. And railway employees felt that their wages and working conditions had fallen behind the standards of other industries. The result was a succession of strikes, authorized and unauthorized, by switchmen, yardmen, trainmen, firemen, engineers and conductors on one or another of the railways of the country. The foremost issue arose out of the introduction of the 40-hr. week. In dealing with this question, decisions by emergency boards had granted only partial compensation for the reduction in hours. Negotiations to improve these awards were interrupted by strikes. Added to this problem was the perennial one of work rules and the realization by railway employees and their unions, as the year rolled on, that they were lagging still farther in relative wages.

Organized labour's intervention in politics received another test in the November congressional elections. The C.I.O. and the A.F. of L. had worked closely together to defeat Senator Robert A. Taft in Ohio and to elect Senator Elbert D. Thomas of Utah. The results were a great surprise, particularly to the labour unions. The Democrats retained control of both the Senate and the House, but by much reduced majorities. More important, however, were Taft's overwhelming victory and the defeat of Thomas, a staunch labour supporter.

The C.I.O. continued to purge itself of unions which were under Communist control. During the year it expelled nine unions, including such important ones as the International Longshoremen's union, Mine, Mill and Smelter, and Fur and Leather Workers. In the electrical manufacturing industry, the International Union of Electrical, Radio and Machine Workers, set up by the C.I.O. to replace the United Electrical Workers, won control over the majority of that industry in elections conducted by the National Labour Relations board. But the U.E.W. retained a substantial membership and a large number of contracts with employers. The A.F. of L. was relatively free from internal dissension during 1950 and was little troubled with Communist influences.

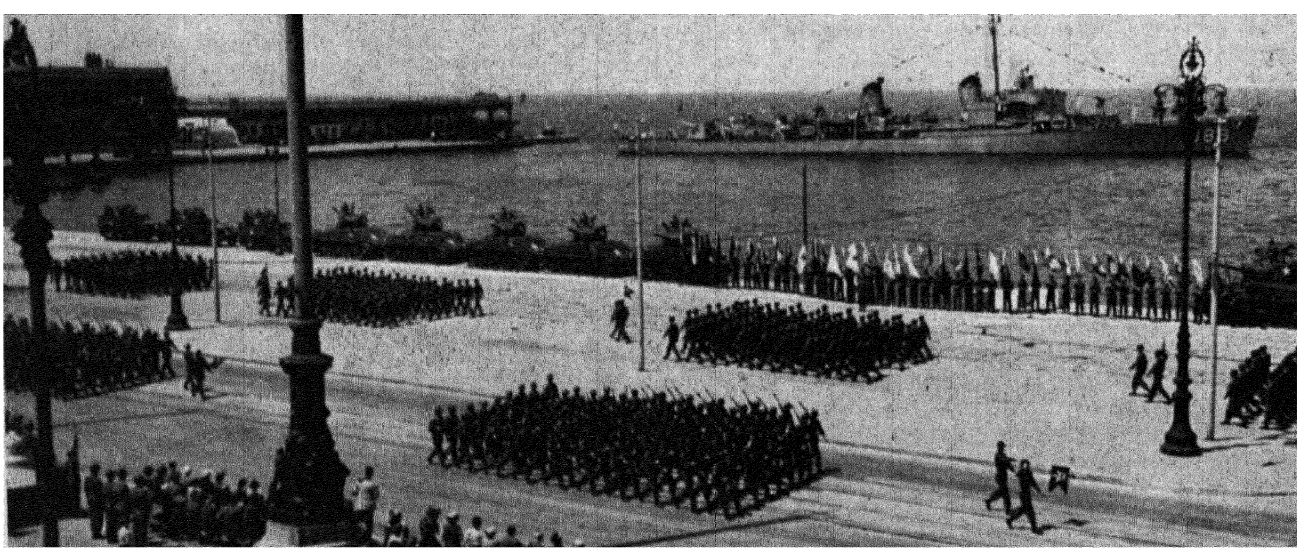
These rival federations of labour continued their search for greater unity and co-operated closely in politics, international labour activities and in their relations with the new war agencies in Washington. Actual merger of the two organizations, however, seemed far away. (L. Wo.)

TRANSJORDAN: *see* JORDAN.

TRIESTE, THE FREE TERRITORY OF. Small state at the northern end of the Adriatic sea, between Italy and Yugoslavia, demilitarized and neutral, whose integrity and independence were assured from Sept. 15, 1947, by the Security council of the United Nations. Total area: 293 sq.mi. Total pop. (mid-1949 est.): 359,000. Military governors under provisional regime: Zone A, British-U.S. (area, 96 sq.mi.; pop., 299,000), Major General Terence S. Airey; Zone B, Yugoslav (area, 197 sq.mi.; pop. 60,000), Colonel Mirko Lenač. Mayor of the city of Trieste, Gianni Bartoli.

History. From the beginning of 1950 the Italian population of Trieste—and a considerable part of the population of Italy—became more anxious and excited than ever over the intentions of the Yugoslav government. On March 4 the latter followed the step it had taken in the previous July with regard to the currency by the abolition of the customs barrier between Yugoslavia and the Yugoslav-occupied Zone B of the free territory of Trieste. The election of 202 local government representatives in Zone B was announced to take place on April 16. Already on Feb. 25 the Yugoslav foreign minister, the Slovene Edvard Kardelj, had made a strong speech at Maribor, implying that his government would never abandon its claims to the whole Trieste territory; and the Italians feared that after the elections the political would follow the economic annexation of Zone B.

In addition to the government-supported Titoist Popular front two other parties were, nominally at least, allowed to put up candidates. One was a genuine Socialist party, more or less equivalent to the Partito Socialista Unitario in Italy, but in favour of the independence of the free territory of Trieste; it was able to hold successful indoor meetings (open-air ones being allowed only to the Popular front). The other was a Christian Social party which none took seriously; it was announced to have leaders who turned out to know nothing about it. In the Italian towns on the coast, Capodistria and Pirano, the population showed little but



ground is U.S.S. "O'Hara."

apathy on election morning. Later in the day many people there seemed to have voted for the Popular front under threats of various kinds. When the results were announced it was stated that 86·77% of the eligible voters had voted: of these 88·36% had voted for the Popular front, 1·7% for the Socialists and 1·14% for the Christian Social party, while 8·8% had spoiled their voting papers. There was a *furore* in the Italian press about Yugoslav terrorism, also on account of assaults upon some Italian and two British journalists; the *Neue Zürcher Zeitung* reported however that the Italian correspondent of the Communist *Unità* showed no signs of the injuries he claimed to have received earlier on the same day.

The Zone B election had been preceded by a conciliatory statement by Marshal Tito to the correspondent of *The Times*, followed immediately by a speech from Count Sforza in Milan on April 8. The Italian foreign minister stood by the western powers' declaration of March 20, 1948. Italy, he said, once the free territory was restored to it, would be ready to make frontier adjustments and provide the Yugoslavs with a free port at Trieste; he hoped much from direct negotiation with Belgrade. At the end of April Marshal Tito responded by hinting at a return to an old Communist proposal by which Trieste would go to Italy and the Slovene-populated Gorizia to Yugoslavia, but this was indignantly rejected from Italy. In fact no further change took place.

On April 20 the U.S.S.R. addressed a note to the three western powers complaining that they had prevented the implementation of the Italian peace treaty with regard to Trieste. They replied on June 16, again putting forward their proposal of March 1948 for the return of Trieste to Italy. On July 8 the U.S.S.R. repeated its complaints, calling for the appointment of a governor of the free territory, the withdrawal of the Anglo-American forces and the "liquidation" of their "illegal naval base" at Trieste.

On Nov. 3 Guido Gonella, the Italian minister of education, inaugurated the new term when the University of Trieste moved into a new building which the Allied military government had helped to complete. In spite of much economic help from the Allies, the British, particularly, were abused in the Italian press for Trieste's troubles, and the Trieste question helped to nourish the revival of fascism on the spot and also throughout Italy. (*See* ITALY). (E. WI.)

Economy and Finance. Budget (1948-49, million lire): revenue 12,800, ordinary expenditure 13,800, extraordinary expenditure 16,300. During the first two years of the E.R.P. (April 1948-March 1950) Trieste received an aid totalling $23·9 million. The principal commodities received (million dollars): bread grains (7), petroleum and products (4), ocean freight (2·9), fats and oils (2·1) and dairy products (1·2).

TRINIDAD AND TOBAGO. British colony, two islands off the South American continent north of the Orinoco river delta. Area: 1,980 sq.mi. Pop.: (1946 census) 557,970 (27,208 on Tobago); (Dec. 1949 est.) 618,603 (30,000 on Tobago), incl. 214,200 East Indians. Language: English, Portuguese, French, Spanish. Religion: Christian 70% (Roman Catholic 34%, Anglican 24%, other 12%), Hindu 23%, Moslem 6%. Chief towns (pop. 1948 est.): Port of Spain (cap., 100,251); San Fernando (31,161). Administration: governor; executive council, 3 *ex offico* members, 5 elected in secret ballot by Legislative Council, 1 nominated; Legislative Council, speaker (without vote) nominated by governor, 3 *ex offico* members, 5 nominated, 18 elected. Governor, Major General Sir Hubert Rance.

History. A new constitution became effective on Oct. 20, 1950. A general election was held on Sept. 18 on an adult franchise. The governor might appoint members of the executive council to be ministers, and all in the new council were assigned ministerial posts. Elected members in the executive council were responsible to the Legislative Council, by whom they might be removed by a two-thirds majority vote. The executive council was presided over by the governor who was bound to accept its advice, though he retained reserve powers subject to the authority of the secretary of state for the colonies, on defence, external relations and finance. An ordinance to provide certain forms of aid to pioneer industries was passed in March 1950; and 14 or 15 industries were declared to come within that category.

Finance and Trade. Currency: West Indian dollar ($4·80=£1). Budget (1950 est.): revenue $46,001,984; expenditure $45,416,418. Foreign trade (1949): imports $154,215,000; exports, incl. re-exports, $138,396,000. Principal exports: oil, petroleum, sugar, rum, cocoa. Sugar crop for 1949-50 yielded 146,508 tons. (P. H.-M.)

TRIPOLITANIA: *see* LIBYA.

TRISTAN DA CUNHA: *see* SAINT HELENA.

TROPICAL DISEASES. In the latter part of 1949 and in 1950 a number of papers appeared on amoebiasis. A. R. D. Adams and D. R. Seaton described an outbreak of amoebic dysentery in Liverpool and brought forward evidence that it should be regarded as a household disease: three families were found in the dock area, in each of which more than one member was found to be suffering from amoebiasis; and conditions were such that it might easily spread. When the standard of personal cleanliness is not high the danger of acute amoebic dysentery in England is that it may be mistaken for ulcerative colitis.

E. Montero and V. Uribe wrote on the diagnosis of amoebiasis. Three methods of investigation were carried out on 70 patients: 17 with acute amoebic dysentery; 27 with chronic intestinal amoebiasis without dysentery; 10 with amoebic hepatitis or liver abscess; and 16 with non-amoebic conditions as controls. The three methods were microscopic examination of faeces, endoscopy and complement-fixation tests. The lesions as seen by endoscopy divide themselves into three grades: (1) small crateriform depressions; (2) superficial erosions; and (3) typical ulcers and submucous abscesses. Of the 17 cases of acute amoebic dysentery, endoscopy showed 5 with grade 2 lesions and 12 with grade 3; 13 were positive by direct examination for protozoa, and 13 gave a positive complement-fixation. Of the 27 cases of chronic amoebiasis, endoscopy showed 17 with grade a lesions, 9 with grade 2 and 1 with grade 3; only 9 showed protozoa by direct examination and only 2 gave a positive complement-fixation. Of the 10 cases of amoebic hepatitis endoscopy showed 4 with grade 1 lesions, 2 with grade 2 and 1 with grade 3 (the other 3 showed no local lesions in the rectum or sigmoid), 5 were positive parasitologically and 8 gave a positive complement-fixation test. On the whole endoscopic examination proved to be the best, especially in chronic cases without dysenteric symptoms, whilst complement-fixation is of special value in hepatic amoebiasis, though less satisfactory in intestinal amoebiasis.

For treatment, the effect of aureomycin was tested by T. G. Armstrong, A. J. Wilmot and R. Elsdon-Dew. *In vitro* experiments by J. L. Bradin and E. L. Hansen had suggested that aureomycin was not itself amoebicidal but acted indirectly by destroying bacteria necessary for the nutrition of the amoebae. The effects of aureomycin were recorded in a standard series of 52 African cases of acute amoebic dysentery: only male patients were used and cyst-passers were excluded; and aureomycin was given by the mouth in doses of 0·25 g. four times daily at six-hour intervals for 15 days. Of 52 patients one who was apparently cured after 15 days required further treatment, and one was an absolute failure. Sigmoidoscopy demonstrated the remarkably rapid rate of healing, 12 being completely healed by the fourth day and 29 by the end of the seventh, though clinical improvement preceded healing by several days. Disappearance of amoebae

was rapid and dramatic (in most cases on the third and fourth days the amoebae had greatly increased in size, sometimes reaching 90 μ). The follow-up, however, was disappointing: one month after discharge 27 of the apparently cured patients returned in relapse. But the dramatic effect upon the most severely ulcerated cases left little doubt as to the immediate curative value; and it was clear that if aureomycin were to be reinforced with some other known amoebicidal agent, the effects would probably be lasting.

C. Durieux, J. Trenous and others at Dakar once again drew attention to the efficacy of the alkaloids of *Holarrhenica africana;* and several other French doctors reported favourably on it. Conessine hydrochloride was put up in cachets (each containing 0·1 g. of the compound for oral administration) and then given in three doses daily until a total of 2·5 g. to 6·1 g. was reached. Requessine however gives rise to a bitter taste in the mouth and sometimes to psychological disturbances.

The treatment of amoebic hepatitis and liver abscess with chloroquine opened up an entirely new avenue. This drug, which was introduced for the treatment of malaria by W. Kikuth, has its maximum concentration in the liver. N. J. Conan first reported the rapid disappearance of clinical manifestations in six cases, though *Entamoeba histolytica* cysts persisted in the faeces: it was suggested that, as it is almost entirely absorbed from the gastro-intestinal tract, its effect upon the amoebae in the liver must be due to plasma or tissue concentrations. F. Murgatroyd and R. P. Kent, P. H. Manson-Bahr, J. G. Basnuev and others all reported successful cases, when other methods of treatment failed. Conan and his colleagues adduced further evidence by reporting two cases of pleural and hepatic amoebiasis treated with chloroquine. From a study of these it appeared that the estimate of the degree of hepatic localization of chloroquine which was based on animal work did in fact obtain in man. The concentrations found in a human volunteer were 0·18 g. a litre in plasma and 300 mg. a kilogram in the liver, a differential of over 1,500 times. The dose of chloroquine is 0·25 g. three times daily by the mouth for as long as 18 days, if necessary. In both of the cases in question only a single thoracentesis was performed, with the removal of 100 c.c. or less of fluid; and in both there occurred prompt and definite clearing of the effusion, whilst in the pleural case chloroquine was apparently life-saving.

Malaria. The pre-erythrocytic stage of *Plasmodium falciparum* was described by H. E. Shortt *et al.* Numerous mosquitos of the species *Anopheles maculipennis atroparvus* and *A. quadrimaculatus* were infected from a patient harbouring gametocytes of *P. falciparum* and were then permitted to feed on a volunteer three days in succession. At a biopsy 140 hr. after the initial feed of the mosquitos (when it was estimated that the pre-erythrocytic forms of the parasite would be at three stages of development separated by intervals of 24 hr.), sections of the liver revealed three stages of pre-erythrocytic schizonts within the parenchymatous cells. In shape they were oval or lobose: the four-day-old forms measured 31 x 26 μ.: the five-day-old forms 5 x 30 μ. The number of nuclei increased with the age of the schizonts which in the oldest stages (140 hr.) were in the process of segmentation; and some of them were already releasing small merozoites (about 0·7 μ across) into the surrounding sinusoids. (P. H. M.-B.)

TRUCIAL SHEIKHDOMS: *see* ARABIA.

TRUMAN, HARRY S. U.S. statesman (b. Lamar, Missouri, May 8, 1884). He was elected to the U.S. Senate in 1934 and re-elected in 1940. Elected vice president of the U.S. on Nov. 7, 1944, he became the 33rd president after the death of Franklin D. Roosevelt on April 12, 1945. He was elected president on Nov. 2, 1948.

The year started normally enough for President Truman, when he delivered his state of the union message to congress in January. He reiterated a demand for enactment of his Fair Deal programme. He expressed confidence that the greatest perils to world peace had been overcome. His hopes for world peace were suddenly shattered when North Korean Communists attacked South Korea on June 25. Under U.N. sanction, he committed the U.S. forces to the defence of South Korea, characterizing the invasion as a direct challenge to the principles of the U.N. When in November the Chinese Communists reinforced the North Koreans and administered a severe setback to the U.N. forces, Truman placed the United States on a semi-war basis. Addressing the country on Dec. 15, he called for a greatly expanded defence establishment, partial mobilization of industry, huge appropriations and taxes and for far-reaching controls over the civilian economy. " Our homes, our nation, all the things we believe in are in great danger," he said. " This danger has been created by the rulers of the Soviet Union." On Dec. 16 he proclaimed the existence of a national emergency. Differences between Washington and London over the Korean problem, with Britain counselling caution lest the localized conflict should lead to a world war, led to conferences at Washington between President Truman and Clement R. Attlee in December.

On Nov. 1, 1950, an attempt to assassinate President Truman at Blair house (his home during repairs to the White House) in Washington was made by two revolutionaries from Puerto Rico, Griselio Torrejola and Oscar Collazo.

TRUST TERRITORIES. Under this heading are grouped former German colonies in Africa and Australasia and the former German islands in the Pacific north of the equator, which became League of Nations mandates after World War I and United Nations trust territories after World War II. The former German colony of South-West Africa which became a League of Nations mandate but not a United Nations trust territory and the former Italian Somaliland which became a United Nations trust territory with Italy as the administering authority on April 1, 1950, are also included. The total area of these territories is approximately 1,247,761 sq. mi. and the total population approximately 18,387,800. Certain essential information on the respective territories is given in the table.

History. For the whole trusteeship system the year 1950 was one of consolidation and constructive progress. A steadier evolution of the Trusteeship council and smoother working became possible by the absence of the U.S.S.R. Since taking its seat the U.S.S.R. had tended to use its influence on the council for propaganda attacks on the so-called imperialist powers and their alleged exploitation of non-self-governing peoples. By 1950 full trusteeship machinery was available and in use, so that the whole area entrusted to United Nations could be kept under continuous observation and reasoned and regular assessment made of the earnestness and goodwill of the administering authorities in carrying out short or long term policies on behalf of peoples living, often in very backward states of civilization, on soil of baffling variety and in climates of violent extremes. Moreover, by the end of the year the Trusteeship council had completed visiting missions to all trust territories and were in possession of a series of reports written by men fully alive to the actual conditions of peoples and territories, together with the comments of the administering authorities on them. Reports thus were available from missions (1949) to the two Togolands and the two Cameroons, and from visiting missions (1950) on Australia's administration of Nauru

TRUST AND MANDATED TERRITORIES

	Area (sq.mi.)	Population		Administering Authority
South-West Africa*	317,725	(1947 est.)	365,000	South Africa
Togoland (Br. Adm.)	13,041	(1948 cen.)	382,717	United Kingdom
Togoland (Fr. Adm.)	22,463	(1947 est.)	944,500	France
Cameroons (Br.)	31,150	(1947 est.)	991,000	United Kingdom
Cameroun (Fr.)	169,436	(1948 est.)	2,902,400	France
Tanganyika	362,688	(1948 cen.)	7,412,327	United Kingdom
Ruanda-Urundi	20,120	(1948 est.)	3,386,362	Belgium
New Guinea, Territory of:				
Northeast New Guinea	69,700			
Bismarck archipelago	19,200	(1947 est.)	900,000	Australia
Certain of the Solomon Is. (Bougainville, etc.)	4,100			
Western Samoa	1,133	(1949 est.)	75,361	New Zealand
Nauru	8	(1948 est.)	3,162	Australia
Pacific Islands N. of Equator†:				
Marianas Is. (exc. Guam)	687	(1949 est.)	53,000	United States
Caroline Is., with Yap Is. and Palau Is.				
Marshall Is.				
Italian Somaliland	216,310	(1949 est.)	971,879	Italy

* League of Nations mandate. † Former Japanese mandates.

and New Guinea, on Western Samoa under New Zealand's administration and, for the first time, on a strategic trust territory, on the Pacific islands under U.S. administration, the Trusteeship council reporting here to the Security council instead of to the general assembly.

The main business of the Trusteeship council at its 6th session which ended at Geneva on April 4 and the 7th session which opened at Lake Success on June 1 was a thorough examination of the annual reports of the administering authorities. All 10 reports were detailed answers to a questionnaire which experience had made highly comprehensive and effective. In its examination of these reports the council singled out a wide field of administrative action for approval. For example, it praised progress made in constitutional reforms, in raising the standard of living and in the expansion of medical services in Tanganyika; the leper settlement work in British Togoland; the improved health administration and increase of native representation in French Togoland; the advances made in all fields in the Pacific islands in spite of their scattered geography and the short period of actual administration. At the same time further efforts were urged in many directions. There were bound to be differences of opinion, for example over the rate or the scale of progress made, between the remoter forces of international control and the administering authorities, who had to cope with problems on the spot often with inadequate finances and personnel and to whom short term policies might seem more capable of realization than long term plans.

On the whole, however, the council's recommendations showed a constructive and helpful spirit and more awareness than on earlier occasions of the actual conditions which administering authorities had to face. These recommendations emphasized the urgent need for expanding medical services, for more education (the subject of a special study by the council), better training of teachers, more schools, more technical education for natives and measures for better nutrition where United Nations technical organizations could give great assistance. Among economic and financial recommendations were the exploitation of ex-enemy land in Tanganyika to remedy the grave shortage of native lands; migration measures in Ruanda-Urundi to meet the threats of soil erosion and famine; the possibilities in British Cameroons linked with Nigeria in an administrative union (these unions were being specially studied by the council); the use of more of the profits from the Cameroon Development corporation for native welfare and, for a similar purpose, more of the profits from the production of gold in New Guinea. A social recommendation of interest dealt with the abolition of corporal punishment.

The council had the task of dealing with a record number of petitions, many of them presented to the visiting missions. To improve machinery for handling petitions the council appointed an *ad hoc* committee at each session to do the groundwork in their examination. Over 100 were dealt with at the 6th session; more still at the 7th. Two of the most notable came from the Ewe tribe who are divided between French and British Togoland and the Gold Coast colony, and from the Bakweri tribe (for land restitution) in British Cameroons. The council gave a hearing to Sylvanus Olympio, president of the all-Ewe conference, at the 6th session and took careful note of the progress made by a joint committee of the French and British administrations to provide a fair solution. After long discussion at the 6th and 7th sessions it was resolved to wait until the actual wishes of the Ewe tribe itself were clarified: a division of opinion appeared to exist as to whether an independent state or an autonomous state in a larger federation was to be desired. In dealing with the Bakweri petition the council emphasized the need of demonstrating clearly to the natives exactly how the plantation lands originally alienated by the Germans were now being worked for the benefit of the inhabitants as a whole.

During 1950 Italian Somaliland came into the trusteeship system making the 11th trust territory. On April 1 Italy took over the administration for a period of 10 years. To assist Italy an advisory council of three was set up, the terms of reference being settled in the trusteeship agreement forwarded to the 5th general assembly. The council noted with approval the spirit with which the new Italy was preparing to carry out its administrative duties under international control.

Most questions of international control were closely related to the trusteeship system. Thus the problem of an international regime for Jerusalem, in default of any genuine willingness to co-operate on the part of either the Israeli or the Jordan governments, was referred to the Trusteeship council which proceeded to draft a statute and forwarded it, together with its own report, to the 5th assembly.

A further step was taken on July 11, in the matter of the Union of South Africa's retention of its mandate for South-West Africa on which no effective agreement could be reached either in the Trusteeship council or at the general assembly when the International Court of Justice at The Hague handed in an advisory opinion containing the answers to three questions. These answers were: South-West Africa continued to be a territory under mandate, (unanimous); the Union of South Africa was not competent to modify this international status without the consent of the United Nations (unanimous); and the provisions of Chapter XII, Articles 75 and 77 of the Charter were permissive, the consent of the parties concerned being required, but the normal course indicated by the Charter would end in a Trusteeship agreement (majority). (M. FE.)

TUAMOTU ISLANDS: *see* PACIFIC ISLANDS, FRENCH.

TUBERCULOSIS. It was easy to be complacent about tuberculosis. In almost all countries that had highly developed health services the death-rate had fallen considerably since the end of World War II; but it could be forgotten that these fortunate countries represented a

minority of the world's population. Thus, the World Health organization review of tuberculosis mortality, *Epidemiological and Vital Statistics Report*, vol. III, no. 10, Oct. 1950, showed that there were only 29 countries " in which the returns may be considered reasonably reliable ": Ceylon and Japan in Asia, Mauritius and the Union of South Africa in Africa, and Chile, Trinidad and Uruguay in Latin America. Where the mortality was believed to be highest the actual figures were unknown, because those countries lacked doctors or health authorities to supply them.

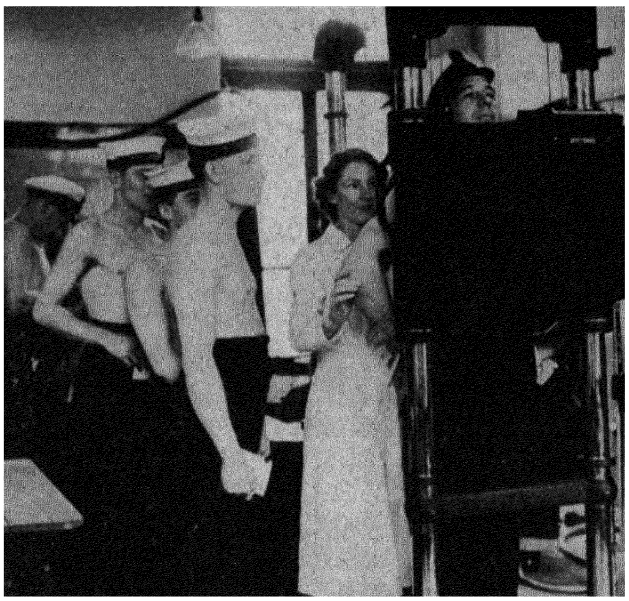
In the United States, New Zealand, the Netherlands and Denmark the death-rate from tuberculosis was already remarkably low before World War II, yet by 1949 the 1937 figures had been cut by a third or more: U.S. from 54 to 28 per 100,000 inhabitants; New Zealand from 39 to 25; the Netherlands from 48 to 24; and Denmark from 44 to 19. Dr. J. B. McDougall, of the W.H.O., forsaw that in New Zealand tuberculosis would in a short time cease to be a major public-health problem. The reduction in the Netherlands was particularly commendable because its death rate rose during the war from 41 to a peak of 86 in 1945, when many Dutch people were getting less than a quarter of the food required for health. Denmark, which had the lowest tuberculosis death rate in the world, managed to prevent any increase in wartime, thanks to its plentiful supplies of home-produced food. France's rate rose to 154 in 1942 but fell after the war, to reach 68 in 1949.

Portugal and Scotland shared the distinction of a slight rise in tuberculosis mortality between 1937-38 and 1947-49. They illustrated Dr. McDougall's remark that one or two " nests " of tuberculosis might give a country a high death rate although most of the country was relatively healthy. Portugal had such a " nest " in Lisbon, where the death rate in 1949 was 317, against 149 for the whole country. Scotland's " nest " was on the western side, where a third of the country's inhabitants accounted for over half its tuberculosis deaths. In England the war turned the previous steady fall in death rates into a slight rise, but in 1945 the rate was back to the prewar 62, by 1949 it was down to 45 and there was a further drop to around 42 in 1950.

The Tuberculosis Association of India estimated the death rate of Indian towns in 1950 at between 200 and 500 per 100,000 inhabitants; in the country the rate was lower but probably increasing. The main causes were overcrowding, shortage of food and the high cost of living.

In Britain and the U.S. since the end of the war tuberculosis had become increasingly a disease of older people, especially older men. In England, for example, in ten years the death rates fell greatly in all age groups from 5 to 55 years, but the 1948 rate for men of 55-65 was 7% higher than the same age group's rate in 1938 and the 1948 rate for men over 65 was 33% higher than the 1938 rate. For women of the same ages the 1948 rates were 24% and 13% respectively less than the 1938 rates.

Human infection with the bovine tubercle bacillus, mainly contracted by drinking infected milk, was a diminishing but still a serious cause of disablement and death, especially in children; only the Scandinavian countries had eliminated it altogether. In other parts of Europe 20%-60% of the dairy cattle were tuberculous. In England a Medical Research council study showed that 39% of all human non-pulmonary infections were bovine, the highest proportions being in tuberculosis of the cervical glands (46%), abdomen (36%) and meninges (27%). Deaths from this cause in Britain were halved between 1941 and 1950, mainly through the increasing pasteurization of milk. A government scheme which came into force on Oct. 1, 1950, aimed to eradicate tuberculosis in cattle from the whole country by freeing selected areas one at a time.



Some of the 60 members of the crew of H.M. Submarine " Amphion " having chest X-rays taken at the Ruchill hospital, Glasgow, in Aug. 1950.

Two main subjects were exercising the minds of those responsible for the treatment of tuberculosis in America and England: the shortage of hospital and sanatorium beds; and the new anti-tuberculous drugs. In England in 1950 over 10,000 patients were on the waiting-lists for the 23,000 tuberculosis beds; even when an active case required urgent treatment it was often six to nine months before a bed could be provided. Such delay is physically and mentally harmful to many patients, and it allows infection to spread to the patient's family and workmates. " Acceptable " hospital beds for tuberculosis in the U.S. totalled 77,200 on Jan. 1, 1950, according to an analysis by officers of the Public Health service; the number needed to bring the total to the Federal standard of 2½ per annual death from tuberculosis was 58,800. In England, where the chief limiting factor was shortage of nurses, the minister of health announced in Dec. 1950, that an additional 1,500 part-time and full-time nurses had been recruited in the previous 18 months, permitting 1,500 sanatorium beds to be reopened. Even so, the total was still far below the desirable 1 per 1,000 population. The expedients adopted to reduce the ill-effects of the shortage were admission of more tuberculosis patients to the general hospitals and the energetic domiciliary treatment for patients awaiting admission.

Only four of the newer drugs were extensively used against pulmonary tuberculosis and meningitis in 1950: streptomycin; dihydrostreptomycin, which proved less effective and not much less toxic than streptomycin and was, therefore, largely abandoned; para-aminosalicylic acid, or P.A.S., whose ability to prevent tubercle bacilli becoming resistant to streptomycin was confirmed; and the German drug thiosemicarbazone, or TB.I.698. These were often more effective when given together or successively. Results varied widely: in general the drugs seemed of great value as an adjunct to older medical and surgical measures, but not as a substitute for them. Tuberculin and several liquefying enzymes were tried in meningitis and in pleural or other abscesses as supplements to streptomycin. Concentrated preparations of vitamin D continued to score " miraculous " successes in some cases of lupus (tuberculosis of the skin).

(E. C.-Js.)

TUNISIA. French protectorate in north Africa situated between Algeria (W.) and Tripolitania (E.), described from 1947 as potentially an associated state of the French Union. Area: about 48,300 sq.mi. Pop.: (1936 census) 2,608,313; (1946 census) 3,230,952. Arabs and Berbers constitute 87·6% of the population; they are Moslem and speak Arabic. In 1946 there were 239,249 Europeans, including 143,977 French citizens (many of them Italian-born) and 84,935 Italians. There were also 71,543 Jews. Chief towns (1946 census): Tunis (cap., 364,593 including 119,222 Europeans); Sfax (54,637); Bizerta (39,327); Sousse (36,566). Ruler, Bey Mohammed el Amin; prime ministers in 1950, Mohammed Kaak and (from Aug. 17) Mohammed Shenik; French residents general in 1950, Jean Mons and (from May 31) Marcellin-Marie-Louis Périllier.

History. Essentially an agricultural country, Tunisia in 1949 recorded production amounting to Fr. 50,000 million against Fr. 20,000 in 1947 and Fr. 34,000 million in 1948. Cereals reached a record figure with nearly 1 million metric tons. Vegetable-oil production exceeded the highest prewar levels. Mining held its own, but the food, textile and chemical industries were in decline. The balance of trade continued seriously adverse.

Politically, 1950 was the most important year since the inception of the protectorate. The French government acknowledged that substantial reforms were necessary. A new resident general was entrusted with the task of negotiating measures by which direct administration, contrary to the spirit of the protectorate of 1881, would be brought to an end. On Aug. 17 the bey gave his approval to a Tunisian ministry led by Mohammed Shenik in which the Tunisians participated in equal strength with the French and in which, for the first time, the Neo-Destour was represented with its own secretary, Salah ben Yussef. A communiqué announced that the cabinet was to negotiate on behalf of the bey "the constitutional modifications which must bring Tunisia by successive stages to internal autonomy." Owing to pressure by the French colonists, the only reform so far achieved was the removal of French advisers from Tunisian minister. On Oct. 7 the resident announced "a pause in politics" and troops fired on striking agricultural workers at Enfidaville, killing 7 and wounding 50 (Nov. 18). The Tunisians interpreted these two attitudes as a return to the politics of force. When the gravity of the situation was made known in Paris, a commission, under the chairmanship of the minister of foreign affairs, issued on Dec. 5 a plan for the reorganization of the government and public office. But the Nationalists regarded the proposed reforms as a subterfuge since they indirectly restored the prerogatives of the secretary general of the residency, who in fact controlled the premier. The bey refused to agree to the proposed reforms. Circumstances had never seemed more favourable for profound changes to be undertaken by stages, owing to the conciliatory spirit and commonsense of Habib Bourguiba, leader of the Neo-Destour.

Agriculture. Main crops (1949, '000 metric tons): wheat 540; barley 400; olive oil 95; dates 37; citrus fruit 37·3; wine 885,000 hl. Livestock (1948, '000 head): cattle 341; sheep 1,588; goats 1,083; pigs 42; horses 72; asses 109; mules 47; camels 177.

Mineral Production. ('000 metric tons, 1949; 1950, six months, in brackets) phosphate rock 1,441·9 (800); iron ore 678·6; lignite 57·8; lead ore 39·1 (26·2).

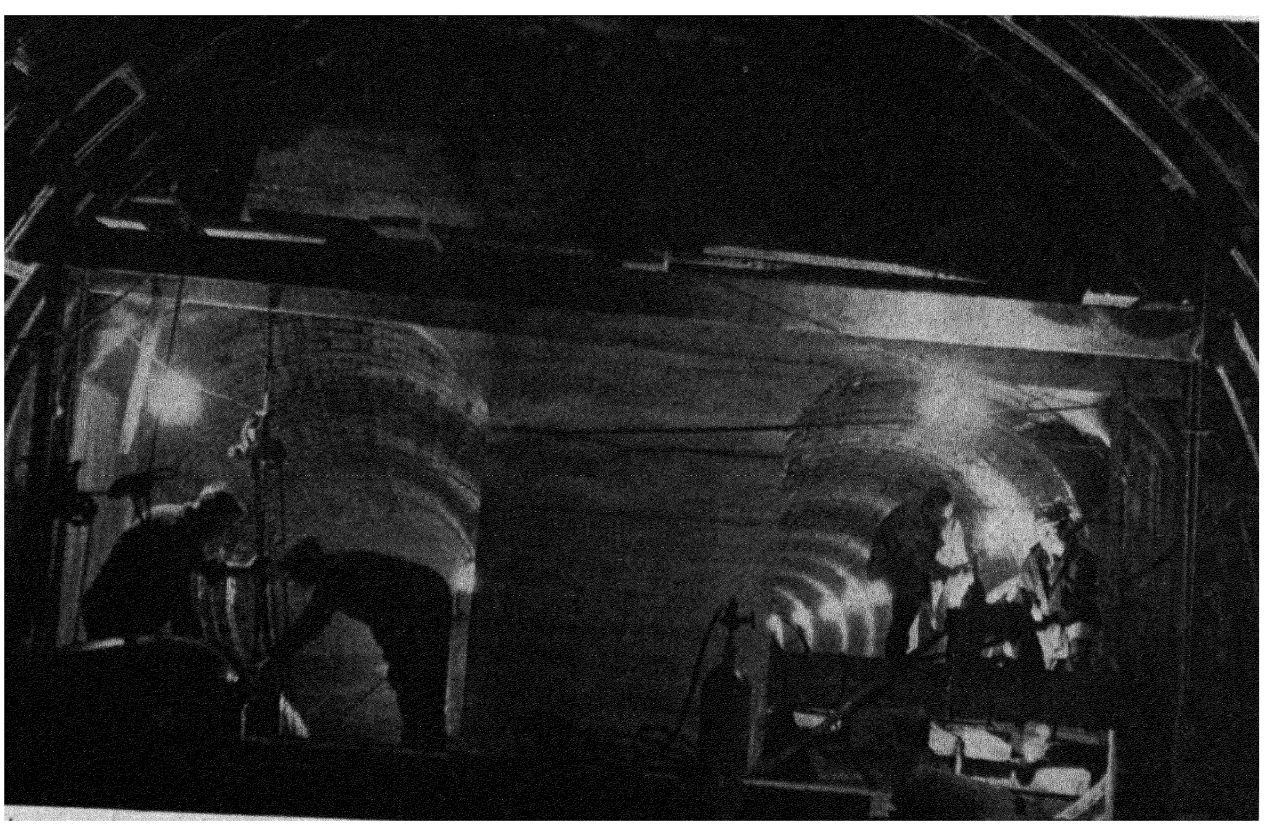
Foreign Trade. (Million francs, 1949) import 40,298·9; export 27,237·1.

Transport and Communications. Railways (1949): 2,174 km. Roads (1949): 8,704 km. Motor vehicles licensed (March 1949): cars 11,062; commercial 6,485. Ships entered (1949) 2,765; cargo carried ('000 metric tons): unloaded 829·5; loaded 3,483·7. Air transport (1949): aircraft landed 6,486; passengers flown: arrivals 33,329; departures 36,454; freight carried (metric tons) 2,436; mail 176.

Finance. Budget (1949-50 est., francs million): ordinary, revenue 16,342·9; expenditure 16,339·6; extraordinary (investments) balanced at 12,923·3. Monetary unit: Tunisian franc = metropolitan franc.

(C. A. J.)

TUNNELS. New technical developments of far-reaching consequences in tunnelling took place during 1950 with the



Work in progress in 1950 on the 400-ft. long pedestrian and bicycle tunnels under the river Tyne from Howdon, Northumberland to Jarrow, Durham. Work on the tunnels was started in 1947.

increasing use of tungsten carbide bits for the rapid drilling of hard rocks. Tungsten carbide's cutting ability and resistance to abrasion allowed the use of very much lighter drills, with fast drilling-speeds and approximately one-third of the consumption of air which was formerly required with heavy drifters and jumbo rigs. This technique originated in Sweden but was adopted on an ever-increasing scale in other countries.

In soft-ground tunnelling the use of bolted reinforced concrete segments became widespread, particularly for smaller diameters in main drainage, water works and circulating water tunnels; this development was outstanding in Great Britain, where advantages arose from the saving in timber. Experiments were also made with a cutting shield followed by interlocking concrete segments which were forced into position by the pressure of the shield jacks and did not require bolting or reinforcement; by this means great economies were expected on tunnels constructed in plastic clays; *e.g.*, in London blue clay.

In England work advanced rapidy on the three-mile double-track railway tunnel through the Pennines at Woodhead. Twenty five miles of tunnel were under construction on the Manchester-Haweswater aqueduct, comprised by the Bowland Forest, Marl Hill and Haslingden and Walmersley tunnels; many of the sections went through soft ground and were difficult to work. Four sub-aqueous tunnels were driven under the Thames under conditi ns of high air-pressure: one 10 ft. 6 in. dia. at Deptford power station; two 8 ft. 6 in. diameter at Blackwall Point power station; and one 9 ft. in diameter at Bankside power station.

In Scotland several of the tunnels made for the North of Scotland Hydro-Electric board were put into operation, including the Cluney (25 ft. in diameter) and the Sloy (15 ft.). The four-mile Fannich tunnel (10 ft.) was successfully blasted through into Loch Fannich at a depth of 80 ft. below the surface of the loch—a very interesting and intricate operation attempted only once before.

In the U.S. the Elizabeth river tunnel between Norfolk and Portsmouth, Virginia, was begun, having a length of 3,330 ft. and a diameter of 31 ft. 4 in. The Brooklyn Battery vehicular tunnel was completed, having a length of 9,117 ft. Each tunnel could carry two lines of traffic.

In Sweden the discharge tunnel of the Hjälta power plant was completed: a work of extraordinary dimensions, it had a length of 20,116 ft., a height of 39 ft. 8 in. and a width of 40 ft. 2 in. and required the excavation of more than 1 million cu. yd. of hard leptite. The Härsprungett discharge tunnel, approaching completion, was to be one of the largest hard-rock tunnels ever driven, having a height of 62 ft. and width of 42 ft. an electrically driven excavator with a capacity of three cubic yards was used for loading the blasted rock in the face. Both of these tunnels were drilled by tungsten carbide bits.

In Australia work was begun on two horseshoe-shaped tunnels 9 ft. 6 in. by 9 ft. at the Little Joe for the city of Melbourne's water supply. The huge Snowy Mountains Hydro-Electric and Irrigation scheme entailing 84 mi. of tunnels up to 27 ft. diameter was initiated.

In France work proceeded on the Croix-Rousse highway tunnel at Lyons (1¼ mi. in length and 39½ ft. in diameter) and on several hydro-electric tunnels in the French Alps. In Austria duplication of the Semmering tunnel, 4,900 ft. long and large enough to accommodate a single line railway, was begun. (J. C. WN.)

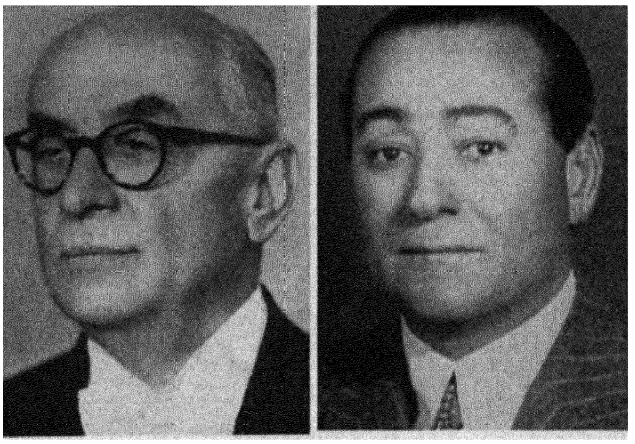
TURKEY. Republic in the southeastern Balkans and Asia Minor, bounded on W. by the Aegean sea, N.W. by Greece and Bulgaria, N. by the Black sea, N.E. by the U.S.S.R., E. by Iran and S. by Iraq, Syria and the Mediterranean. Area: 296,184 sq.mi. (including 9,256 sq.mi. in Europe). Pop.: (1945 census) 18,790,174; (1950 census, preliminary returns) 20,902,628. According to 1945 census, European Turkey had 1,496,612 inhabitants (165 per sq.mi.) and Anatolia 17,293,563 (59 per sq.mi.). Foreign-born Turkish citizens (1935 census): 962,159, including 367,801 in Greece, 227,464 in Bulgaria, 158,145 in Yugoslavia, 69,798 in the U.S.S.R. and 61,649 in Rumania. Language (1935 census): Turkish 86·8%, Kurdish 9·3%, Arabic 0·9%, Greek 0·7%, Circassian 0·6%, Armenian 0·4%, Georgian 0·5%, other 8%. Religion: Moslem 97·7%. Other religions (1935 census): Christian 226,167 (Greek Orthodox 125,046, Gregorian Armenian 44,526, Roman Catholic 32,155, Catholic Armenian 11,229, Protestant 8,486, other Christian 4,725); Jewish 78,730. Chief towns (1950 census): Ankara (cap., 286,592); Istanbul (1,000,092); Izmir (23,508); Adana (118,000); Bursa (100,007). Presidents of the republic in 1950: Ismet Inönü and (from May 22) Celâl Bayar (*q.v.*); prime ministers in 1950: Şemsettin Günaltay and (from May 22) Adnan Menderes (*q.v.*).

History. The year 1950 was an eventful one for Turkey. The general election on May 14 resulted in a landslide in favour of the young Democratic party, which surprised everybody. The Democrats won 408 seats in a house of 487. The National party had one seat, there were a few independents and the remainder represented what was left of the old Republican People's party. Celâl (pronounced Jelal) Bayar was elected president of the republic; the new prime minister was Adnan Menderes, a landowner educated at the American college in Izmir; the foreign minister was now Fuat Köprülü, a historian of European repute, who was expelled from the Republican party five years before for writing an article attacking single party government. The other ministers were specialists. Thus the old benevolent oligarchy gave place to a real democratic government.

The programme of the new government might be summed up in long-range fiscal reform, with efforts to balance the budget and reduce the cost of living, the denationalization of the great state industries and a more generous attitude towards the working classes and non-Moslem citizens. The size of the government majority was so great that absolute cohesion was not to be expected and there were changes in the composition of the cabinet before the close of the year. There were 18 parties in Turkey, but few were serious. The new Socialist party was authorized to function on July 20. It claimed to be a guide to socialism in Turkey, with the keynote of equality and stability in international relations and the struggle for world peace. This party was encouraged by serious writers as the best insurance against an extremist left. Its organ *Gercek* (Truth) was attacked by Moscow radio. It repudiated any foreign influence. There was also a Democratic Labour party, not Marxist, to support small artisans and peasants. All these parties were united against communism.

There was also a small group who called themselves the Friends of Peace, led by a woman, who protested against the dispatch of troops to Korea. It was discovered that they took directives from Moscow, and they were prosecuted. A large group of deputies signed a petition to make Communist leaders liable to the death penalty.

Foreign Relations. Turkey's stability in its foreign relations remained unaffected by the change of government, which had the effect of increasing its prestige abroad. It showed clearly its intention to accept all the obligations implied in its policy of Europeanization along the road of genuine democracy and the identification of its ideals with those of the western democracies. Turkey was elected to the Security council and took an active part in the debates of the Council



Celâl Bayar (left) and Adnan Menderes (right) who in May 1950 became respectively president and prime minister of Turkey, after the Democratic party had won the general election.

of Europe. It was the first state to announce its decision to dispatch a brigade to support the army of the United Nations in Korea. Disembarked at Pusan in the second half of October, the Turks fought brilliantly at Kunuri, in November, under Brig. General Tahsin Yazici, showing once more their soldierly qualities of courage and stubbornness.

Turkey's disappointment at not being accepted in the North Atlantic treaty was largely compensated by the invitation to be associated with the planning work of the N.A.T. organization with regard to the defence of the Mediterranean area.

With Greece its relations remained very friendly, as with the Arab states, which looked to Turkey with respect. In a speech at the opening of the Grand National Assembly in October, President Bayar stated that relations with the U.S.S.R. were correct. With Bulgaria there were serious difficulties. The attempt by that country to expel 250,000 Turks, survivors of the former status of Bulgaria as an Ottoman province, led to serious tension. In this difficult problem Turkey's attitude was correct and many thousand refugees were admitted, embarrassing the government with problems of settlement. The attempt by Bulgaria to compel Turkey to accept non-Turkish subjects without visas was prevented by the closing of the frontier. The president stated that, unless the Bulgarian government gave a satisfactory reply, the matter would be referred to international adjudication.

Economic Policy. The programme of denationalization was bound to be very slow. A few items were released by the state monopoly for free trading and there was talk of a release of state shipping, but the biggest step in this direction was the sale to a group of Turkish capitalists of the great cotton mills at Adana, being one of the components of the vast string of state enterprises administered by the Sümer bank. The price was £T 450,000.

Foreign capital was to be encouraged and protected. The International Bank for Reconstruction accorded Turkey a credit of $12·5 million for the improvement of the ports of Istanbul, Izmir, Samsun, Zonguldak and Iskenderun. But it was under the European Recovery programme that the greatest amount of U.S. aid came. In November the director of the U.S. Economic Co-operation administration announced that he had been authorized to spend £T 126 million from the counterpart fund for the promotion of agriculture and industry. Foreign exchange to the value of $40 million was allocated under the European Recovery programme for the first year's expenditure upon the new 80,000 kw. power station on the river Sakarya.

But the immediate problem was to overcome heavy deficits in the budget, which was rendered difficult by the legacy of previous governments. With this was interlocked the endeavour to bring down the high cost of living. Some steps in this direction were made at once, such as a cut of 20% in the price of sugar and of 10% in certain state-produced textiles. It was stated that the government aimed at the reduction of the state expenditure by £T 200 million of which by the end of the year some £T 40 million was saved. A thorough reform of the whole fiscal system was contemplated.

Turkey expected to draw substantial benefit from its inclusion in the European Payments union. Serious shortage in sterling and dollar exchange prevented it from importing anything but necessities. The government endeavoured to simplify the formalities that had hampered foreign trade in the past. Controls were relaxed over a long range of commodities and a process of liberation and decentralization was begun.

A marked feature was the revival of trade with Germany, which was Turkey's best customer and the main source of imports before World War II. In the first half of 1950 Germany replaced Great Britain as Turkey's first customer, buying £T 52·5 million worth of goods; it moved to second place as exporter to Turkey with £T 47·1 million.

Miscellaneous. Istanbul was becoming a centre for international conventions: 22 states sent their delegates to a congress of the International Civil Aviation organization. In August a meeting was held of the World Assembly of Youth.

In archaeology discoveries continued. Professor H. Th. Bossert reported the discovery at Karatepe of Hittite remains of the period of King Asitavandas, approximately 750 B.C., with inscriptions in Hittite characters. At Karataş the site of an extensive town said to date approximately from 1,200 B.C., destroyed when the river Seyhan changed its course, was exposed. In Istanbul, in digging the foundations for a private house at Silihtaraga, the workmen came upon pre-Byzantine remains. The ancient monuments' authorities took over the site and compensated the owner.

Mme. Mufide Ilhan was elected mayor of Mersin: she was the first woman in Turkey to occupy such a position. Another woman, Mme. Zehide Birsel, was appointed director in the Directorate General of Pious Foundations.

An oratorio entitled *Yunus Emr* by Adnan Saygun was executed by the Philharmonic Orchestra of Philadelphia, Pennsylvania, U.S. In literature, a work by Ihsan Origan, entitled *Portrait of a Turkish Family* was published in England and the United States.

Public opinion was satisfied by the removal by the National Assembly of the penalties upon the calling to prayer from the mosques in Arabic. In addition to the new mosque at Şişli, a residential suburb of Istanbul, built by private subscriptions from merchants, numerous subscriptions were received from private persons for the repair of mosques.

During the year there were notable instances of philanthropy. Sureyya Pasha, grandson of Riza Pasha, the last *serasker*, presented an estate worth over £T 4 million to the Organization for Social Insurance, with the object of building a rest village and sanatorium. He also presented a cinema worth £T 1 million to the Darülşefaka orphanage. Refik Hifzi Büyükarslan gave house property valued at £T 1 million to the same institution. The influx of refugees from Bulgaria called for public assistance. The daily newspaper *Hürriyet* opened the list with £T 10,000; the Association of Dealers in Motor Parts raised £T 7,565 and the Ottoman bank gave £T 5,000.

During the year the government distributed nearly

90,000 ac. of land on state farms to landless peasants and helped to start them at work.

Symptomatic of the changing face of Turkey was the diminution of the system of Turkish baths, the *hamams*, that had become world famous. Of the 350 public baths that there were formerly in Istanbul, only 75 remained. Many establishments over 400 years old closed their doors through rising costs, difficulties in the supply of water and fuel and the smaller demand.

Marshal Fevzi Çakmak died in April (*see* OBITUARIES). A link with the past was snapped by the death at the age of 87 of Ali Haydar, son of the great statesman Midhat Pasha, pioneer of Liberalism in the Ottoman Empire, who was strangled in 1884.

A remarkable disaster occurred near Izmir when a fire, said to have been caused by a cat, destroyed 434 houses and 140 shops, doing damage to stored food to the value of £T 700,000 and injuring 43 persons. (MA. BR.)

Education. Schools (1948-49): primary 15,310, teachers 30,546, pupils 1,474,671; secondary 321, teachers 4,112, pupils 65,960; *lycées* 88, teachers 1,858, pupils 22,721; farming and handicraft 21, pupils 12,273, teachers 698; professional 268, teachers 3,947, pupils 48,230; institutions of higher education 33 (including the universities of Istanbul and Ankara), teaching staff 1,336, students 26,400. Illiteracy (1945): male 49·2%; female 77·5%.

Agriculture. Main crops ('000 metric tons, 1949; 1950 in brackets): wheat 2,557 (4,500); barley 1,220; oats (220); maize (609); rye 274 (445); potatoes 471; sugar, raw value 140; tobacco (1948) 74; cotton, ginned 97; grapes, total 1,681; olives (1948) 214; linseed 52. Livestock ('000 head, Dec. 1949): cattle 10,279; sheep 25,840; horses 1,164; camels 109; mules 104; asses 1,711; buffaloes 937; mohair goats (Dec. 1947) 4,162; turkeys (Dec. 1948) 1,145; chickens 18,434. Wool production, greasy basis, ('000 metric tons, 1949) 32.

Industry. Fuel and power (1949; 1950, six months, in brackets): coal ('000 metric tons) 4,188 (2,180); lignite 1,272; electricity (million kwh.) 682 (351); crude oil ('000 metric tons) 13 (15). Raw materials ('000 metric tons, 1949; 1950, six months, in brackets): iron ore, metal content, 210 (113); pig iron 113 (54); steel ingots and castings 99·6 (47·9); copper smelter 11·3 (5·3); chrome 177 (151); manganese ore (1947; 1950, six months, in brackets) 5 (11·6). Manufactured goods ('000 metric tons, 1949): cement 374; cotton yarn 29·8; wool yarn 7·9.

Foreign Trade. (£T million, 1949; 1950, six months, in brackets) import 812·6 (359·9); export 693·6 (298·9). Main sources of imports (1949): U.S. 20%; U.K. 17%; France 6%; Italy 5%. Main destinations of exports: Germany 16%; U.S. 14%; U.K. 12%; Czechoslovakia 8%. Main imports: machines 21·4%; cotton and woollens 16·5%; iron and steel 10·7%; petroleum products 7·7%; cereals 5%. Main exports: tobacco leaf 37%; cotton 11%; raisins (seedless) 7%; hazelnuts (shelled) 6%.

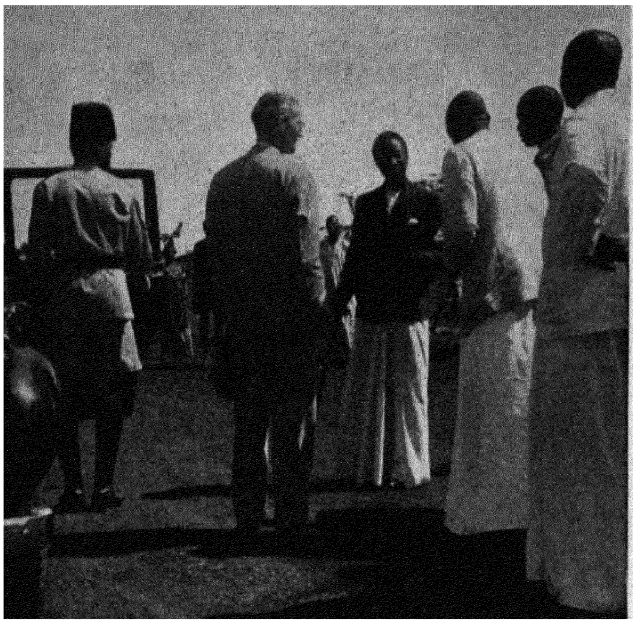
Transport and Communications. Roads (1949): 13,530 mi., including 7,900 mi. all-weather roads. Licensed motor vehicles (Dec. 1949): cars 7,951; commercial 13,872. Railways (1949): 4,672 mi.; passenger-mi. 1,350 million; freight net ton-mi. 1,469 million; freight carried ('000 tons) 7,284. Shipping (July 1949): number of merchant vessels over 100 gross tons 191; total tonnage 312,031. Air transport (Turkish State airways, 1947): flights 6,712; mi. flown 1,188,109; passengers flown 78,844. Telephones (1949): subscribers 52,423. Radio receiving sets (1949) 250,000.

Finance and Banking. (£T million) budget: (1949) revenue 1,251·8, expenditure 1,371·8; (1950 est.) revenue 1,313·3, expenditure 1,487·2. Currency circulation (Aug. 1949; Aug. 1950 in brackets): 930 (946). Gold and foreign exchange (million U.S. dollars, Sept. 1949; Sept. 1950 in brackets): 191 (190). Bank deposits (Feb. 1949; Feb. 1950 in brackets): 845 (842). Monetary unit: Turkish pound or *lira* with an exchange rate of £T 7·84 to the pound sterling and £T 2·80 to the U.S. dollar.

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UBANGUI: *see* FRENCH EQUATORIAL AFRICA.

UGANDA. British protectorate in east Africa bounded N. by the Anglo-Egyptian Sudan, E. by Kenya, S. by Tanganyika and Ruanda Urundi trusteeships and W. by the Belgian Congo. Area: 93,981 sq.mi. Pop.: (1948 census): 4,926,725, incl. 4,885,760 Africans, 3,448 Europeans, 35,215 Indians and 2,302 other non-Africans. Language: principally Luganda, of the Bantu group; also Swahili and, in the northeast, Nilotic tongues. Religion: Africans mainly pagan, some Moslem and a few Christian. Capital, Entebbe. Administration: governor; executive council; Legislative Council, 6 *ex officio*, 10 nominated official and 16 unofficial members, the last comprising 4 Europeans, 8 Africans and 4 Asians; in Buganda, native ruler (kabaka) with three ministers and native council (lukiko). Governor, Sir John Hathorn Hall.



The Kabaka of Buganda (centre facing camera) during a visit to the hydro-electric scheme at Owen Falls, Uganda, Jan. 1950.

History. The report of the inquiry into the 1949 disturbances was published in Feb. 1950, the main findings being that the disturbances had been a planned rebellion by the Bataka party against the kabaka and his government. In March seven of the leaders of the rebellion were sentenced to long terms of imprisonment. Compensation more than £145,000 was awarded to those who had suffered loss in the rioting, to be paid by the people of Buganda, but they were let off with half the amount and it was collected by means of a 6*s*. levy. A measure of constitutional reform was introduced early in the year providing for equality of official and unofficial representation in the Legislative Council; two African members were to be elected by each of the four provincial councils. The governor presides and has a casting vote. On March 10 was celebrated the jubilee of the Uganda agreement of 1900, the basis of Great Britain's relationship with the kingdom of Buganda, the occasion being marked by the announcement that Makerere had been raised to the status of a university college and that colonial development grants totalling over £1 million had been approved for it. In July, the governor issued a proclamation re-affirming that all land outside the towns and the kingdom of Buganda was held in trust for the African population. There was no intention of encouraging non-African settlement.

Work on the construction of the Owen Falls hydro-electric scheme at Jinja, for which the contract had been let in Sept. 1949, proceeded. Work was started on a £1,500,000 cement factory about 80 mi. from the dam.

Finance and Trade. Currency: East African shilling (20*s*. = £1 sterling). Budget (1950 est.): revenue £7,705,574; expenditure £7,130,647. Foreign trade (1949): imports £12,817,633; exports, incl. re-exports, £23,805,322. Principal exports: raw cotton, coffee, cigarettes, sugar.

(K. G. B.)

UKRAINE. A republic whose independence was proclaimed at Kiiv (Kiev) on Jan. 22, 1918, but which, from Dec. 30, 1922, was incorporated in the U.S.S.R. The Ukraine is bounded N. by Byelorussia, N.E. and E. by the Russian federation, S. by the Crimea (incorporated in the R.S.F.S.R.) and the Black sea and W. by the Moldavian S.S.R., Rumania, Hungary, Czechoslovakia and Poland. The Ukrainians, sometimes described as Little Russians or Ruthenians, are a Slav people akin to the Russians and the Poles. Before World War II all Ukrainians in the U.S.S.R. were Greek Orthodox; in Poland they were Greek Orthodox in Volhynia and Greek Catholic in Eastern Galicia (about 2,800,000); in Rumania they were Greek Orthodox in Bessarabia and Greek Catholic in Bukovina (about 250,000); in Czechoslovakia (Sub-Carpathian Ruthenia) they were mostly Greek Catholic. By 1945 a total area of 46,271 sq.mi. with an estimated population of 9,239,000 was annexed to the Ukrainian Soviet Socialist Republic.

Territories	Area (sq.mi.)	Population ('000, 1939 est.) Ukr.	Russ.	Poles	Jews	Other	Total
Pre-1939 Ukraine	171,777	20,720	6,780	500	2,200	760	30,960†
From Poland	32,557	4,350	30	1,850	550	169	6,949
From Rumania*	8,791	740	50	100	150	525	1,565
From Czechoslovakia	4,923	550	—	—	75	100	725
Total	218,048	26,360	6,860	2,450	2,975	1,554	40,199

* Northern Bukovina and the Bessarabian districts of Hotin, Izmail and Cetatea Alba (Akkerman). † 1939 Census.

According to the 1926 census out of a total of 31,194,976 Ukrainians only about 23,080,000 (74%) lived in the Ukrainian republic. The 1939 census revealed that the Ukrainian population of the U.S.S.R. was reduced to 28,070,404. No indication was given as to what percentage lived in the Ukrainian republic. Assuming that the proportion was still 74%, this would give 20,720,000 Ukrainians in the republic. During and after World War II great changes took place in the composition of the population. According to the *Bolshaya Sovietskaya Entsiklopedia*, about 2·5 million people (probably 40% of them Jews) were killed during the German occupation; 1·5 million died of hunger and exhaustion and 3 million were deported to Germany as slave workers. In Feb. 1949 the government of the Ukrainian S.S.R. appealed to Ukrainians remaining in western Europe to return and they alleged that over 1,250,000 had already returned. As at least 2,650,000 Ukrainians had been repatriated to the U.S.S.R. it must be assumed that about 1·4 million were sent not to the Ukraine but elsewhere. Between Oct. 1939 and June 1941 about 700,000 Poles were deported to the Soviet Union and during 1945-46 about 800,000 were transferred to Poland in exchange for 500,000 Ukrainians transferred to the Ukrainian S.S.R. From the former Polish provinces there were many deportations of Ukrainians who had resisted collectivization. By 1948 the total loss of population in the existing frontiers was estimated at 7,250,000, including about 4,750,000 Ukrainians. If there had been no changes in the population the proportion of Ukrainians living in the republic would be about 66%. In March 1950, for the purpose of the election to the Soviet of the Union, the population of the republic was officially estimated at 40·8 million. The losses enumerated above would suggest that the proportion of Ukrainians had been reduced to 54%. Chief towns (1939 census): Kiev (846,293); Kharkov (833,432); Odessa (604,223); Dnepropetrovsk (500,662); Stalino (462,369), Lviv or Lwów (318,000). Chairman of the presidium of the Supreme Soviet of the Ukrainian S.S.R., Mikhail Sergheyevich Grechukha; chairman of the council of ministers, Demyan Sergheyevich Korotchenko.

History. Franklin D. Roosevelt and Winston Churchill having agreed at Yalta to Joseph Stalin's request that the Ukraine should be a founder member of the United Nations, Dmitri Zakharovich Manuilsky was appointed minister of foreign affairs and in 1945 was among the signatories of the U.N. charter at San Francisco. He headed the Ukrainian delegation at four successive general assemblies of the U.N. The 1950 delegation was led by A. M. Baranovsky, deputy premier. There was no Ukrainian representation abroad and no foreign country maintained a diplomatic mission at Kiev. Answering a written question in the British House of Commons, Kenneth G. Younger, minister of state, explained on March 13, 1950, that in Aug. 1947 the British *chargé d'affaires* in Moscow had requested the Soviet government to transmit to the government of the Ukraine a proposal that Great Britain and the Ukraine should exchange diplomatic representations, but no answer was ever received. Foreign diplomats were prohibited from visiting the western parts of the Ukraine and Kiev was included in the prescribed area.

The Ukraine is the richest Soviet republic. Before World War II, although covering only 2% of the total area of the U.S.S.R. (9·6% of its European part) and embodying only 18% of its total population, the Ukraine was producing half the Soviet coal, three-quarters of its iron ore, over three-fifths of its pig iron and almost half its steel. The Ukraine greatly suffered from wartime destruction and in consequence coal extraction at the beginning of 1945 was only 6·5% and pig-iron production only 2·4% of prewar output. The Ukrainian heavy industry was completely rehabilitated during the postwar five-year plan.

CONTRIBUTION BY UKRAINE TO SOVIET INDUSTRIAL PRODUCTION
('000 metric tons with percentages of the total Soviet output)

	1913	1940	1950
Coal	22,760 (78%)	83,728 (50%)	89,000* (34%)
Iron ore	6,388 (80%)	18,900 (75%)	20,000† (60%)
Pig iron	2,832 (68%)	9,183 (61%)	9,700† (50%)
Steel	2,300 (55%)	8,622 (48%)	8,800† (35%)

* Actual. † Target of the five year plan.

Rehabilitation of heavy industry was not followed by equally rapid rebuilding of houses. Fighting during the German offensives and retreat had destroyed some 38 million sq. metres of floor living-space: on Oct. 29, 1949, D. S. Korotchenko, the premier, stated in *Izvestia* that 21 million sq. metres of the floor living-space had been rebuilt or repaired. This meant that five years after liberation 45% of the houses were still in ruins. No information was published as to the progress of housing during 1950.

From the agricultural point of view the Ukraine, with its fertile black soil, was one of the most prosperous members of the Soviet Union. In 1940 the Ukraine produced two-thirds of the sugar and over one quarter of the wheat in the U.S.S.R. In the southern provinces of the Ukraine rain was variable and often inadequate. According to another article by Korotchenko (*Izvestia*, Sept. 22, 1950), there had been 22 years of drought in the area since 1887. On Sept. 21, 1950, the Soviet government decreed that a dam and a hydro-electric power station were to be constructed near Kakhovka on the Dnieper with a yearly power production of 1,200 million kwh.; in addition, from Zaporozhye a South Ukrainian canal was to be built which would continue as a North Crimean canal through Dzhankoy to Kerch, a total length of 550 km.; a system of water reservoirs and smaller waterways would irrigate the provinces of Kherson, Zaporozhye, Nikolayev and Dniepropetrovsk, a total area of 1·2 million ha. with an additional 300,000 ha. in the Crimea. The planting of forest shelter belts along the canals and the boundaries of the irrigated land would protect the area against the *sukhovey*, the hot, dry east wind. The plan was to be completed by 1956.

Soviet leaders often stressed that the Ukrainian people, disunited for centuries, owed to Soviet policy the realization of their dream of unity. In fact, however, the people dreamed not only of unity but also of freedom and independence and this explained why so many continued to oppose Soviet

Russian power. The Moscow *Pravda* revealed on Aug. 3 that national guerrilla fighters were still active in western parts of the Ukraine. Women from the provinces of Transcarpathia and Izmail in a message of greeting to Stalin said that Ukrainian Nationalists had sought but failed to hinder collectivization. On Oct. 21 the foreign headquarters of the Ukrainian Insurgent Army (Ukrainska Povstanska Armia) announced at Munich that Lieut. General Taras Chuprynka, commander in chief, had been killed fighting against Soviet forces, and his secret headquarters in the Carpathians had been captured.

Many Ukrainian Communist leaders had perished in prewar purges, among them two successive Ukrainian premiers, Panas Lyubchenko, who was shot in 1937, and Vlas Chubar, who was executed in 1939. The secretary general of the Ukrainian Communist party from 1937 to 1949 was a Russian, Nikita Khrushchev (*q.v.*). He was succeeded as secretary general of the Ukrainian central committee by another Russian, Leonid Gheorghyevich Melnikov, when he himself became first secretary of the party's Moscow regional organization on Dec. 18, 1949.

On March 12 the Ukraine elected 136 deputies to the Soviet of the Union and 25 deputies to the Soviet of Nationalities. Colonel General Andrey Antonovich Grechko, commander of the Kiev military area, was among the elected members of the Supreme Soviet. On Dec. 17, 322,608 deputies were elected to the 25 provincial, 749 district, 261 town, 16,358 village and 477 hamlet soviets.

By 1947 there were no Roman or Greek Catholics in the Ukraine, at least openly: Poles had been removed from the country and Ukrainians who belonged to the Greek Catholic faith were forced to renounce their religion in favour of the Orthodox Church headed by the Moscow patriarch.

Education. Schools (1950): elementary and secondary 29,768, pupils 7,170,000; technical 560, universities and institutions of higher education 157, total students 501,000.

Finance. Budget (1950 est.): revenue Rb. 17,240·3 million; expenditure Rb. 17,194·5 million.

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ULBRICHT, WALTER, German politician (b. Leipzig, June 30, 1893). In his early days an artisan, he joined the German Social Democratic party (Sozialdemokratische Partei Deutschlands, or S.P.D.) in 1912. After World War I and the collapse of imperial Germany he joined the Spartacus league, later German Communist party (Kommunistische Partei Deutschlands, or K.P.D.) in Saxony. In 1928 he was elected a member of the Reichstag and was re-elected in 1930 and twice in 1932. In 1928 he attended the sixth world congress of the Communist international in Moscow and was elected a member of the executive committee (I.K.K.I.). In 1933 he fled to France, was in Moscow two years later (where he was re-elected a member of the I.K.K.I. by the seventh congress of the Comintern) and served as a political commissar with the international brigades in Spain (1936-38). From 1938 he remained in Moscow, where in 1943 he became a member of the Free German committee. He returned to Germany with the Soviet army in 1945, became a member of the central committee of the reconstituted K.P.D., which in April 1946, in the Soviet zone, merged with the left wing of the S.P.D. into the Socialist Unity party (Sozialistische Einheitspartei, or S.E.D.). On the formation of the government of the German Democratic republic on Oct. 12, 1949, he became deputy prime minister. By the third S.E.D. congress he was on July 25, 1950, elected a member of the nine-man politburo and to the new post of secretary general of the party.

UNEMPLOYMENT: *see* EMPLOYMENT.

UNION OF SOUTH AFRICA: *see* SOUTH AFRICA, UNION OF.

UNION OF SOVIET SOCIALIST REPUBLICS. Federation of soviet socialist republics, a Eurasian state covering parts of eastern Europe and northern and central Asia. Area (Sept. 17, 1939): 8,173,557 sq.mi. Pop. (1939 census): 170,467,186. In 1939 the union consisted of 11 republics of which the Russian Soviet Federated Socialist republic was by far the largest (78% of the whole territory and 64% of the population). Of the remaining 36% of the population, almost one-half lived in the Ukrainian Soviet Socialist republic (2% of the territory) and the other half in the nine other republics of the union. The U.S.S.R. is inhabited by almost 100 different nationalities speaking different languages. In Jan. 1939 Russians constituted 58·4% of the population, Ukrainians 16·6% and Byelorussians 3·1%. None of the other nationalities, all non-Slav and most of them non-Europeans, reached 3% of the total. The most important were Uzbeks 2·9%, Tartars 2·5%, Kazakhs 1·8%, Jews 1·8%, Azerbaijanis 1·3%, Georgians 1·3% and Armenians 1·3%.

In 1939 the U.S.S.R. consisted of the following republics:

	Capital	Area (sq.mi.)	Population (1939 census)
Russian S.F.S.R.	Moscow	6,372,800	109,278,614
Ukrainian S.S.R. (*q.v.*)	Kiev	171,777	30,960,221
Byelorussian S.S.R. (*q.v.*)	Minsk	49,022	5,567,976
Georgian S.S.R.	Tiflis (Tbilisi)	27,020	3,542,289
Azerbaijan S.S.R.	Baku	33,196	3,209,727
Armenian S.S.R.	Erivan	11,580	1,281,599
Uzbek S.S.R.	Tashkent	145,908	6,282,446
Kazakh S.S.R.	Alma-Ata	1,059,184	6,145,937
Kirghiz S.S.R.	Frunze	76,042	1,459,301
Tadzhik S.S.R.	Stalinabad	55,584	1,485,091
Turkmen S.S.R.	Ashkhabad	171,384	1,253,985

Between 1939 and 1945 the U.S.S.R. considerably expanded its territory. In Europe the following areas were added:

	Area (sq.mi.)	Population (1939 est.)
Estonia	18,357	1,134,000
Latvia	25,395	1,994,500
Lithuania (including the Wilno area)	25,173	3,032,000
From Finland	17,596	100,000*
From Poland (excluding the Wilno area)	64,824	10,315,000
From Rumania (Besarabia and N. Bukovina)	19,338	3,650,000
From Czechoslovakia (Sub-Carpathian Ruthenia)	4,923	725,400
From Germany (N.E. part of East Prussia)	5,096	830,000
Total	180,702	21,780,900

* 1945 est.; 413,000 Karelians left in 1944 to resettle in Finland.

From Japan the U.S.S.R. acquired Karafuto or southern Sakhalin (13,935 sq.mi.; pop. 331,900) and the Chishima or Kurile Islands (3,994 sq.mi.; pop. *c.* 90,000). In addition the formerly "independent" republic of Tannu Tuva (64,000 sq.mi.; pop. *c.* 65,000) was added to the union.

After World War II the U.S.S.R. formed a federation of 16 republics. The five new ones were: the Karelo-Finnish S.S.R. (cap., Petrozavodsk); the Moldavian S.S.R. (cap., Chişinau or Kishinev); and Estonia (*q.v.*), Latvia (*q.v.*) and Lithuania (*q.v.*) transformed into Soviet republics. Total area: 8,436,188 sq.mi.

Addition of the figures quoted above would give a total population of 192,735,000. The official estimate for 1940 was 193 million (E. Davydov in *Bolshaya Sovietskaya Entsiklopedia: S.S.S.R.*, suppl. vol., Moscow, 1948). The only postwar estimate, published in *Pravda* of Jan. 23, 1946, by Gheorghy F. Alexandrov, then propaganda chief of the All-Union Communist party, gave the same figure.

Chief towns (1939 census): Moscow (*q.v.*) (4,137,018); Leningrad (3,191,304); Kiev (846,293); Kharkov (833,432);



Cartoons from the Soviet press in 1950. Left, " Belgrade-Athens Axis " showing Truman, Tito and Tsaldaris. Centre, " The Golden Rouble " compared with the struggling pound and dollar. Right, " U.S.A. and Bacteriological Warfare " showing General MacArthur saluting Japanese holding tubes of noxious bacteria.

Baku (809, 347); Gorki, formerly Nizhny Novgorod (644,116); Odessa (604,223); Tashkent (585,005); Tiflis (519,175); Rostov-on-Don (510,253); Dnepropetrovsk (500,662). Chairman of the presidium of the supreme soviet of the U.S.S.R., Nikolay M. Shvernik; chairman of the council of ministers, Marshal Joseph V. Stalin (*q.v.*).

History. The year 1950 saw no important change in the political outlook of the Soviet Union or in its relations with the outside world. Some commercial contacts were maintained and even extended; but the enforced isolation of the Soviet peoples from external currents of thought continued. At the end of August for instance, the British government announced the closing down of the paper *Britansky Soyuznik* (British Ally) which had been published by the embassy in Moscow since the war years. The grounds given were the restrictions laid upon its circulation by the Soviet authorities. Soviet comment referred to the anti-Soviet and bellicose tone of the paper as having resulted in the fall in its circulation. In the field of foreign affairs proper, the one-way traffic in ideas was exemplified in the efforts channelled into the so-called " peace-movement " (*see* COMMUNIST MOVEMENT). It was more than ever difficult for the foreign commentator to discover where the interests of world Communism ended and where those of the Soviet Union as a sovereign state began. Indeed a feature of the year was the growing realization by western observers that the two problems were largely inseparable and could only be dealt with as a single whole, if the offensive against the non-Soviet world was to be resisted successfully.

The diplomatic activity of the Soviet Union was divided into two parts, chronologically, by the outbreak of war in Korea in June and by the subsequent and consequent decision of the Soviet government to abandon its boycott of the United Nations that had begun in January as the result of a refusal of the latter to admit the Chinese Communist representative in place of the Nationalist delegate.

Despite the hopes expressed as a result of a somewhat conciliatory attitude of the Soviet delegation on its arrival in New York, the attitude taken up towards the various problems confronting the United Nations at the September meeting of the general assembly suggested little change in fundamental Soviet policies. Once again it was suggested that great power co-operation was the proper motive force for all U.N. action; and the Soviet delegation took the lead in presenting its familiar proposals on atomic and general disarmament and in suggesting a revival of the dormant military staff committee. The Soviet government also opposed the U.S. plan for overcoming the obstacles placed by the veto through the transference of greater initiative to the assembly. The use of the veto to block the renomination as secretary general of Trygve Lie, on the ground that he had improperly used his position in the handling of the Korean question, and the threat to ignore his renomination by the assembly were indicative of the limitations still put to the idea of international co-operation.

Andrey Y. Vyshinsky's speeches at Lake Success carried on the main line of previous Soviet propaganda to the effect that the Soviet Union was a bastion of peace against American war-mongering. While this was the main weapon used to hamper the opposition to Soviet expansionism, the Soviet Union in its relations with the countries of eastern Europe was continuing the process of consolidating the " satellite countries " into a single bloc. Its precise relations with Communist China were however much less clear.

Assimilation of People's Democracies. The techniques of



Two of the posters exhibited in the Soviet Union during the 1950 election campaign.

reinforcing Soviet control through economic and political means showed little change from the previous year. In Poland, Marshal K. K. Rokossowski's (*q.v.*) entry in May into the Polish Politburo was significant of the extent of the political control now exercised. And in the autumn there were reports that the Czechoslovak army, like the Polish army, was being thoroughly reorganized on the Soviet army model. The propaganda war against Marshal Tito's regime in Yugoslavia showed no signs of abating.

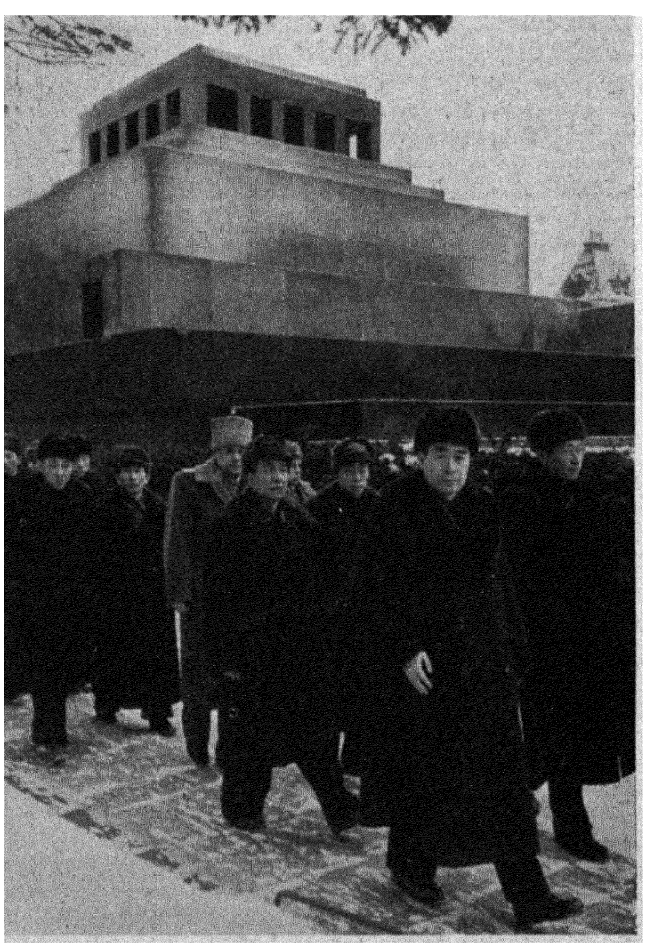
Soviet Policy in Germany. The Soviet hesitation over German policy continued. Should Eastern Germany be treated like the other satellites to which it was in this period linked by an increasing number of agreements concluded under Soviet auspices? Or would this mean the certainty of a re-armed Western Germany appearing in the forefront of the anti-Soviet defences in Europe? As during the previous year, both policies seemed to have been pursued simultaneously. At the same time, Soviet intransigence over the proposed peace treaty for Austria was regarded as proof of the insincerity of Soviet professions of their desire to create a peaceful and united Germany.

A new trade agreement with the Eastern zone was signed on April 12 and a supplementary one on July 21. In an exchange of letters in May it was agreed that the total of Soviet and Polish reparations outstanding should be reduced by 50%. On the other hand, it was admitted that although some important industrial enterprises had been returned to the Germans, others still remained in Soviet hands, giving the Soviet government a direct hold upon the Eastern German economy. At the same time, as the western powers were denounced for setting up an anti-Soviet arsenal of aggression in Western Germany, the reports of a heavily armed police force in Eastern Germany became more circumstantial and formed the basis for a protest by the three other occupying powers to the Soviet government on May 24. No progress was made as the result of a proposal sent to the Soviet Control commission two days later for a procedure for setting up a united German government. Nor was the Berlin situation essentially altered. The Soviet statement on May 4 that all German prisoners had been repatriated from the Soviet Union was not generally accepted (*see* PRISONERS OF WAR).

In the first half of the year Communist activity in Western Germany had been directly subversive but some change came in October when after the symbolic consolidation of the Eastern German Communist regime in single-list elections, V. M. Molotov met in Prague the foreign ministers of the satellite states, including Eastern Germany. A communiqué from this conference on Oct. 21-22 proposed four points as the basis of a final settlement of the German problem. These proposals were: a four-power declaration reasserting the Potsdam policy; the removal of all limitations on peaceful German industry together with the maintenance of controls against the restoration of Germany's war potential; the conclusion of a peace treaty and the withdrawal of all foreign troops within a year of its signature and, finally, the calling of an all-German assembly with equal numbers of representatives from Eastern and Western Germany to prepare for the setting up of an all-German government. These proposals substantially reproduced those made after the Warsaw meeting on the same lines in June 1948. On Nov. 3, these proposals were called to the attention of the three western powers in notes handed to their ambassadors in Moscow, and it was suggested that the Council of Foreign Ministers should be convened at once " to examine the question of the fulfilment of the Potsdam agreement on the demilitarization of Germany."

Soviet Policy in the Far East. Since the Soviet government could do little but protest ineffectually against the continued control of Japan by General Douglas MacArthur, and against the measures taken by him and by the Japanese government against Communist activities, most interest in the far east centred on relations between the Soviet Union and China to which a new complexity was given by the outbreak of the Korean war.

After negotiations in Moscow lasting for several weeks, a series of agreements between the U.S.S.R. and the Chinese People's republic was signed in Moscow on Feb. 14. These were ratified on April 11. They included first a 30 years' treaty of friendship, alliance and mutual assistance on the lines of those with the Soviet Union's western neighbours. The second agreement altered in favour of the new regime the provisions about Manchuria contained in the 1945 treaty concluded with Chiang Kai-shek. The Chinese Changchun railway was to be handed over to the full ownership and control of China immediately upon the conclusion of a peace treaty with Japan and in any event not later than the end of 1952. Some modifications in its joint administration were to come into force at once. The same period was fixed for the return of Port Arthur, though the U.S.S.R. as well as China was to be allowed to use it in the event of war with Japan. It was recognized that the administration of Dalny (Dairen) belonged to China, and this subject too was to be reconsidered after the conclusion of the Japanese peace treaty. It was also announced that the Soviet Union would hand over to the Chinese government property " acquired by Soviet organizations from Japanese owners in Manchuria." A credit of $300 million over a period of five years at 1% interest was granted to China. On March 27, a further agreement setting up two Sino-Soviet companies for the exploitation of Sinkiang's mineral wealth was signed, and a trade agreement with China followed on April 19.



Chou En-lai, prime minister and foreign minister of China (right foreground) visiting Lenin's mausoleum in Moscow, Jan. 1950.

When the fighting broke out in Korea at the end of June, the Soviet government at once took up the attitude that it was the result of a premeditated attack by South Korea upon North Korea. The measures taken by the Security council during the period of the Soviet Union's boycott were regarded as contrary to the charter and the subsequent fighting was described in the Soviet press as being the product of the illegal intervention of the United States into a foreign civil war. An attempt at mediation through an approach by Jawaharlal Nehru to Joseph V. Stalin was frustrated by the premature publication of the correspondence on the Soviet side, apparently with the object of showing that the only reason for fighting continuing was the refusal of the Security council to seat the Chinese Communist representative or to hear a North Korean spokesman. The latter objectives were those clearly sought by Yakov Malik (*q.v.*) when he took the chair in the council at its August meetings, thus ending the boycott. A dispute over the shooting down of a Soviet plane in far eastern waters early in September and other incidents helped to exacerbate Soviet-U.S. relations. But it seemed clear that there was no desire on the part of the Soviet Union to engage itself directly in the conflict. And when Chinese troops intervened early in November it was not possible to say to what extent, if at all, such intervention formed part of the general Soviet plan.

Internal Affairs: Economics. As usual internal "self-criticism" rather than the official statistical material, with the difficulties of interpretation it presented, afforded the main method by which the internal economic progress of the Soviet Union could be measured. The most important field in which shortcomings were pointed to was that of agriculture and as the year went on it became evident that an attempt at a major change in agricultural policy was being made, although as usual it was hard to know what lay behind some of the reports of its progress. The first symptoms came in February when Andrey A. Andreyev, the member of the Politburo with special responsibilities in the field of agriculture, acknowledged criticisms to the effect that he had allowed too much latitude to peasant individualism in the method of organizing work on collective farms. At the same time, there were reports suggesting that an attempt was being made to bring about the voluntary surrender to the collective farms of the plots which the peasants had been allowed to retain for their own use under the legislation of the 1930s. In a long article in *Pravda* on April 25, Nikita S. Khrushchev (*q.v.*), also a member of the Politburo, gave the signal for a campaign of a different kind—the aim now being to amalgamate the collective farms into larger units on the ground that *kolkhozes* of 30 families or less were too small to make full use of modern mechanized farming methods. Judging by later comments on the progress of this campaign, it ran into some opposition on the part of the peasantry who must have regarded it as yet another attempt to break their cherished link with the land. A further attack on what survived of individualism on the land was a decree of Aug. 16 raising the level of taxation upon individually held plots. In October it was learned that one of the tasks of the winter months would be to settle in larger agglomerations the peasants who had previously lived in the smaller villages. This process was however being held up by delays in providing the necessary buildings. (*See* PEASANT MOVEMENT.)

Although it may seem reasonable to regard the process as partly at least determined by the persistent inadequacy of the food supply for the country's rapidly growing population, a deeper social and political motive clearly underlay it. This was made plain in a *Pravda* leader on Sept. 18:

> The Soviet state has armed our agriculture with powerful equipment —tractors, combines and other machines which have lightened greatly the labour of the collective farmers and made it more efficient. Agricultural labour is gradually being transformed into a type of industrial labour. One of the most important tasks of Communist construction—abolishing the difference between town and countryside—is being successfully solved.



V. M. Molotov, deputy prime minister of the Soviet Union (centre), at a meeting of Eastern European foreign ministers, Prague, Oct. 1950. On his right is M. A. Silin, ambassador to Czechoslovakia, and on his left, V. S. Semenov, political adviser to the Soviet control commission in Germany.

It was thus admitted that the "permanent" agricultural settlement of the 1930s was being set aside and that the Soviet rulers felt it possible and desirable to proceed to the proletarianization of the peasantry.

More spectacular were the announcements made on Aug. 21 of a series of new dam and canal projects for irrigation, navigational and hydro-electric purposes, which were used to press home the moral that the Soviet Union was engaged in peaceful construction at a time when the rest of the world was indulging in war-mongering. These included a scheme for a big new dam and hydro-electric station at Kuibyshev and for a big hydro-electric station at Stalingrad. Another scheme announced on Sept. 14 was for the construction over a period of seven years of the main Turkmenian Amu Darya-Krasnovodsk canal which was calculated to alter fundamentally the situation in western Turkmenia, along the lower reaches of the Amu Darya and in the western part of the Kara Kum desert. Soviet comment emphasized that the work would be performed mainly by mechanical means, not by gang labour. On Sept. 21, a project for a new Dnieper hydro-electric station at Kakhovka was announced.

Internal Affairs: Politics. Elections for the Supreme Soviet were held on March 12. There was as usual only one list of candidates; 99·98% of the electorate went to the polls (*see* ELECTIONS).

The Supreme Soviet held a session in Moscow from June 12-19. Its chief business was the budget which had an estimated revenue of Rb. 432,000 million and an estimated expenditure of Rb. 427,000 million. A state loan of Rb. 20,000 million had been oversubscribed in May. The Supreme Soviet also sanctioned amendments to the constitution to allow for the changes made in the number and composition of ministries: according to the new law, promulgated on June 17, there were 30 "all-union" or common ministries and 21 "union-republican" or separate ministries.

As usual there was some interest attached to the order in which the various prominent members of the Soviet hierarchy were mentioned in reports of these events. Judged by this criterion, the order of precedence among the members of the Politburo was as follows: J. V. Stalin, V. M. Molotov, G. M. Malenkov, L. P. Beria, K. E. Voroshilov, A. I. Mikoyan, N. A. Bulganin, L. M. Kaganovich, A. A.

Andreyev, N. S. Khrushchev, A. N. Kosyghin and N. M. Shvernik.

Changes in the holders of important posts during the year included the following: on Jan. 21 Mikhail G. Pervukhin became the 14th vice chairman of the council of ministers and was replaced as minister of the chemical industry by Serghey Tikhomirov; on Jan. 2 K. M. Sokolov, minister of town development, was succeeded by Gheorghy M. Popov; on Jan. 11 A. A. Goreglyad, minister of shipbuilding industry, was replaced by Vyacheslav A. Malyshev, one of 14 vice chairmen of the council of ministers; the next day Yury E. Maksarev was appointed minister of the transport machinery industry, releasing Ivan I. Nosenko; on Feb. 25, the Ministry of Armed Forces was divided into two and Admiral Ivan S. Yumashev was appointed minister of the navy; on April 18 S. A. Akopov, minister of the automobile and tractor industry, was replaced by Grigory S. Khlamov; on May 29 S. Z. Ginzburg, minister of the building materials industry, was replaced by Pavel A. Yudin and on the same day David Y. Reiser was appointed minister of construction of heavy industry enterprises; in July Colonel General Pavel F. Zhigarev was learned to have replaced Marshal Konstantin A. Vershinin as commander in chief of the air force. On Oct. 27 it was announced that Lev Z. Mekhlis had resigned from the Ministry of State Control owing to ill-health and had been replaced by Vsevolod N. Merkulov, formerly minister of state security. At the same time, the minister of agricultural stocks, Boris A. Dvinsky, was replaced by Panteleymon K. Ponomarenko. On Dec. 28 the Ministry of Metallurgical Industry was divided into two: Ivan F. Tevosyan, deputy premier, was appointed minister of ferrous metallurgy and Petr F Lomako minister of non-ferrous industry.

On Jan. 12, the death penalty for treason, espionage and sabotage, abolished in May 1947, was restored.

Cultural. The event of the year in the cultural field was generally held to be the publication by Stalin on June 20 of an article in which he took part in a controversy which had been going on about the linguistic theories of a well-known Soviet philologist, N. Y. Marr (1864-1934). This writer's theories had enjoyed a virtual monopoly as the only true Marxist theory of language since the 1920s. Stalin now attacked Marr's basic view that language is part of the "superstructure" of a particular economic order. Stalin argued that, on the contrary, language is not included in the superstructure and hence that the Russian language was basically the same as it had been before the revolution. He also approved of the study of "families" of languages, such as the Slav tongues which Marr had deprecated.

Two further contributions to the controversy were published in August in *Bolshevik*. In the same issue another letter of Stalin dealt with a more general theoretical problem, namely that of the means by which the conclusions of Marx and Engels should be applied to current issues. It was wrong, said Stalin, to quote the works of an author without reference to the period at which they were written and it was not the case that a formula arrived at through the study of one period of history was true for all periods. Stalin's examples were the view that Socialism in one country was not possible and that after the victory of Socialism the state should "wither away."

Russian Marxists (he said) have arrived at the conclusion that Engels's formula had in view the victory of Socialism in all countries or in most countries, that it is inapplicable where Socialism wins in one country taken separately while, in all other countries, Capitalism predominates.

By the same argument applied to linguistics, Stalin argued that a common world language incorporating the best elements of existing ones would be created but only when Communism eventually triumphed. Meanwhile:

Marxism does not recognize immutable conclusions and formulae, binding for all epochs and periods. Marxism is the enemy of all dogmatism.

Whether this sally betokened serious official misgivings as to the sterility of Soviet culture as a result of its enforced conformism and whether there were in fact symptoms of some reaction against the position taken up by Andrey Zhdanov during the cultural "purge" of 1948, it was too early to say. One interesting example of a new latitude was however the open discussion on the advantages and disadvantages of co-education and on other aspects of educational theory which took up some space in the Soviet press in the summer. (*See* EASTERN EUROPEAN ECONOMIC PLANNING.) (M. BLF.)

Education. According to a report by N. A. Bulganin made in Moscow on Nov. 6, 1950, there were 37 million pupils in primary, secondary and lower technical schools and 1,247,000 students in universities and institutions of higher education (*Vyssheye Uchebnoye Zavedenye* or V.U.Z.), which was 400,000 more than in 1940. The number of primary and secondary schools was given by Mme. Lyudmila Dubrovina, deputy minister of education of the R.S.F.S.R., as 220,000 and the number of teachers as 1,600,000 by Evgheny Medynsky, a member of the Soviet Academy of Educational Sciences. There were 31 universities and about 850 V.U.Z. In the autumn about 350,000 young men and women were enrolled in the institutions of higher education and 130,000 of the 1,247,000 students were in Moscow.

Training of officials and technicians was the main task of the higher education. There was a great increase in the number of state employees (*sluzhashchiye* or servants). In a report presented to the 18th congress of the All-Union Communist party, Vyacheslav Molotov said that from 1925 to 1939 the number of state employees rose from 1,850,000 to 10,916,000.

Agriculture. Despite the precise and vigorous decisions of the council of ministers of the U.S.S.R. and of the central committee of the Communist party published on March 19, 1950, requiring the 4,540 state farms (*sovkhozy*) and 254,000 collective farms (*kolkhozy*) to increase agricultural production and give the country a bumper harvest, the targets fixed for 1950 were not reached. This was admitted by Bulganin when quoting in his report the harvest figures for grain and sugar-beet. Only cotton production was higher than the figure aimed at, exceeding it by 12%.

TABLE I. AGRICULTURAL PRODUCTION (million metric tons)

	1913*	1930	1938	1940	1950 Plan	1950 Actual
Grain†	80·1	83·6	90·0	119·0	127·0	124·7
Sugar-beet	10·9	14·0	16·7	21·8	26·0	24·3
Potatoes	23·3	47·5	65·6	84·2	115·3	?
Cotton, unginned	0·7	1·1	2·7	2·7	3·1	3·8

* Pre-World War I Russia in 1921 frontiers.

† Bread grain and coarse grain together. According to Soviet statistics in 1938, for example, 67% of all grain produced was bread grain (wheat 39·0, rye 24·5, buckwheat 1·1, millet 2·1 and rice 0·3).

The picture was less clear in the field of animal husbandry. A. I. Mikoyan, speaking at Erivan on March 10, reported a serious lag in livestock breeding in general and in cattle breeding in particular. Eight months later, however, Bulganin asserted that the commonly owned animal husbandry had not only fully attained the prewar level but also considerably surpassed it. He added that there were 38% more

TABLE II. LIVESTOCK IN THE U.S.S.R.
(million head; A = actual, T = target)

	Collective Farms			State Farms		Privately-owned		
	1940	1950		1938	1950	1938	1949	1950
	A	T*	A†	A	T*	A	A*	est.
Cattle	20·1	28·0	27·7	3·7	4·5	25·1	30·0	25·0
Pigs	8·2	13·0	12·7	2·8	4·0	12·8	7·2	7·4
Sheep & Goats	41·9	73·0	65·1	7·0	10·7	30·7	26·5	23·2
Horses	14·4	—	—	—	—	—	—	—
Poultry	—	120·0	—	1·6	—	—	350·0	—

	Totals				
	1913	1938	1940	1950	1950
	A	A	A	T	A‡
Cattle	60·6	63·2	71·0	65·3	57·2
Pigs	20·9	30·6	36·1	31·2	24·1
Sheep and Goats	121·2	102·5	108·5	121·5	99·0
Horses	35·8	17·5	20·6	15·5	13·7
Poultry	—	—	—	470·0	—

* Decree of U.S.S.R. Council of Ministers and Central Committee of the Communist party (*Izvestia*, April 19, 1949). † Figures obtained by multiplying the actual figures for 1940 by percentages given by N. A. Bulganin on Nov. 6, 1950. ‡ Figures given by the Central Statistical Administration of the U.S.S.R. on Jan. 27, 1951.

SOURCE: *Bolshaya Sovietskaya Entsiklopedia: S.S.S.R.* (Moscow, 1948) for figures for 1913, 1938 and 1940.

cattle on the collective farms, 55% more pigs and 65% more sheep and goats than in 1940. Published numbers for 1940 of the livestock on collective farms showed, by comparison with the official targets fixed for 1950 and the achievements in the same year, that 1950 targets were in fact not reached by the collective farms. Moreover, in its report on the fulfilment of the five-year plan during 1950, the Central Statistical Administration of the U.S.S.R. gave the total figures for all categories of livestock at the end of the year. From Table II, containing all the information known officially about the position of livestock in the Soviet Union, it is clear, that not only were the targets fixed for 1950 not reached but also that the U.S.S.R. had less livestock in 1950 than in 1940, and even less than in 1938, that is, before the annexations of 1939-40. Yet, according to Bulganin, the Soviet government supplied the population with 35% more meat and meat products and 60% more butter and other fats than in 1940. Only imports from the satellite countries could explain this increase. It must be remembered, however, that the country suffered heavy losses in livestock during the German occupation.

Industry. Reporting on the achievements of the postwar five-year plan, Bulganin said that the plan marked another glorious stage in the development of the fatherland. It provided for the gross industrial output in 1950 to exceed that of 1940 by 48% in value. In the fourth quarter of 1950 the average monthly output exceeded that of 1940 by 53% in value and 70% in volume.

TABLE III. INDUSTRIAL PRODUCTION

(1950, million metric tons; electricity in '000 million kwh.)

	U.S.S.R. Plan	U.S.S.R. Actual	United States	United Kingdom	Western Germany	France and Saar	Benelux countries
Coal	250·0	264·0	471·0	218·5	108·7	65·0	38·0
Crude oil	35·4	37·6	268·0	0·16	1·1	0·1	0·7
Electricity	82·0	86·7	319·8	52·5	40·8	31·5	14·4
Pig iron	19·5	19·2	59·5	9·6	9·5	9·0	6·4
Steel	25·4	27·6	87·8	16·5	12·1	10·0	6·0

If only absolute figures of output were considered, the U.S.S.R. was the second industrial power of the world. But comparison of coal and steel production per head of the population discloses that the Soviet coal output was 1·3 metric tons per head as against 4·3 tons in the U.K., 3·1 tons in the U.S., 2·5 tons in the Benelux countries, 2·0 tons in Western Germany and 1·5 tons in France and the Saar customs union area. The Soviet output of 134 kg. of steel per head of the population was far behind production in the U.S. (585 kg.), the U.K. (330 kg.), the Benelux countries (316 kg.), Western Germany (257 kg.) and France with the Saar (240 kg.).

The devastated Donets coal basin was restored and modernized: it produced in 1950 over 89 million tons of coal, that is, 10% more than in 1940. However, as coal mining in the Urals, in the Moscow and Pechora areas, in the Kuznetsk, Karaganda and other coalfields considerably expanded, the Donbas produced in 1950 only 34% of the total coal output as against 47% in 1940.

In connection with the production of crude oil Bulganin disclosed that the "eastern regions" accounted in 1950 for 44% of the total output as compared with 12% in 1940. In other words, Baku, which produced in 1940 over 27 million tons of crude oil, produced in 1950 much less. As the eastern, or Asiatic regions produced 16·5 million tons, there remained only 21·1 million tons for Baku and some other European oilfields.

On the subject of consumer goods Bulganin said that the Soviet people in 1950 received 38% more cotton, wool, silk and linen fabrics, 35% more footwear and 37% more hosiery than in 1940. But, already scarce before World War II, these goods had disappeared during the war and meanwhile the population had increased by at least 23 million.

Speaking of housing, one of the acutest problems of Soviet economy, Bulganin said that in 4 years and 10 months about 90 million sq. metres of floor living-space (that is, without kitchens, bathrooms, passages and lavatories) had been rebuilt or newly built in the towns and more than 2·5 million houses had been built in the rural areas. To appreciate these figures it is necessary to remember that between 1923 and 1939 living-space in towns decreased from 6·4 sq.m. per head to 4 sq.m. and that out of 2,567,000 dwelling houses in German-occupied towns, 1,209,000 were destroyed or badly damaged and that to restore prewar conditions it would be necessary to build about 60 million sq.m. of housing floor-space in the war-damaged areas alone. The targets for the main building materials were fixed for 1950 as follows: felled timber 280 million cu.metres; sawn timber 39 million cu.m.; cement 10·5 million metric tons; slate 410 million sheets; window glass 80 million sq.m. According to a report addressed to Joseph Stalin on Jan. 7, 1951, by the minister of the building materials industry, the figures set for cement and slate were over-fulfilled. No mention was made of timber and glass. For shortage of timber, especially striking, in a land of immense forests, there were three reasons—insufficiency of tractors and timber-cutter machinery, lack of skilled technicians and inadequate transport.

Foreign Trade. In the Soviet Union, foreign trade, a state monopoly, is used as a political weapon. The U.S.S.R. was always ready to sell grain or timber—of which it was itself short—in order to earn the dollars or pounds sterling necessary to buy industrial equipment, machine tools and certain key raw materials, mainly rubber, tin and wool. After World War II the U.S.S.R. was able to exploit the economic resources of its satellite countries, buying from them much more cheaply than the world market prices and selling to them at much higher rates.

Statistical data of the foreign trade of the Soviet Union are not published.

TABLE IV. BRITISH-SOVIET TRADE (£ '000)

	1947	1948	1949
Imports from the U.S.S.R.	7,536	27,126	16,014
Exports to the U.S.S.R.	12,272	5,337	8,614

In 1949 the Soviet Union took only 0·6% of British exports and supplied 0·7% of British imports. The U.S.-Soviet trade sharply declined after 1947 and in 1949 the U.S.S.R. took only $8 million of the U.S. exports (0·07% of the total) and supplied $50 million of the U.S. imports (0·66% of the total). As the U.S. were not in need of Soviet coarse grain or timber, the Russians, short of dollars, were delivering even manganese ore and chrome.

The reason for the insignificance of Soviet trade with the west was political. Since the Soviet Union showed its hand as an unfriendly power highly industrialized western countries were not prepared to help Soviet armament by supplying strategic raw materials and latest models of industrial machinery.

Transport and Communications. Transport was always the weakest point of the Soviet economy. Densely populated areas are widely separated from sources of food supply, fuel and industrial raw materials; iron and coal abound but at considerable distances apart; rivers and canals are frozen for many months in winter. Taken with the general backwardness of the country, these facts explain the situation.

The chief communications in the U.S.S.R. are the railways which in 1950 accounted for 83% of all goods traffic and 90% of all passenger traffic. In 1940 the total length of the railways was 105,300 km. —an increase of 46,800 km. in two decades; by 1950 it was estimated at 112,530 km. Bulganin said in his report that by the end of 1950 the goods carriage was 40% above the prewar level. As in 1940 the railways transported 415,000 million ton-km., the percentage disclosed would suggest that the 1950 traffic attained 581,000 million ton-km. —a formidable figure, but only 67% of the railway goods traffic in the U.S. whose area was only 37% of that of the U.S.S.R. The completion of the Pechora railway line was announced and the last section, Kozhva-Vorkuta, was opened to traffic in November.

The five-year plan stipulated that by 1950 the total length of navigable inland waterways should be increased to 115,000 km. with a yearly goods traffic of 49,000 million ton-km. No information was available as to the achievements in this domain, but in order to improve inland water transport two decisions were taken by the government during the year: on Sept. 11 it was decided to build the main Turkmenian canal linking the Amu Darya river to Krasnovodsk on the Caspian sea, and on Dec. 27 to complete the Volga-Don shipping canal started before World War II. With the completion of the Volga-Don waterway, which was scheduled for 1952, it would be possible for coal and steel from the Donbas to be transported to Stalingrad by water; the completion of the Turkmenian canal would enable the transport of cotton from central Asia to the textile mills in central Russia and in the reverse direction would travel grain and industrial goods.

There were few all-weather highways suitable for motor traffic. No private motoring existed, although the production of motor vehicles by 1950 was supposed to amount to 65,000 cars, 6,400 buses and 428,000 lorries. The *Sotsialisticheskoye Zemledelye* (Aug. 24, 1950) reported that for the second year in succession the *kolkhozniki* (workers on collective farms) were using tens of kilometres of the Moscow-Riazan highway for drying grain.

Shipping of 1,824,000 deadweight tons by mid-1950 occupied the tenth place in the world (Greek shipping occupying the ninth) and represented 2·2% of world tonnage. Out of a total of 437 ships the Soviet Union had only 60 of more than 7,000 gross tons including 40 received from the U.S. as part of the Lend-Lease scheme and 10 former German ships taken as reparation.

Civilian Air Fleet (*Grazhdansky Vozdushny Flot* or G.V.F.) was operating an air transport system of 175,000 km. inside the Soviet Union and also had a monopoly for air services between Moscow and the satellite capitals in Europe. On Aug. 1 the newly formed Soviet-Chinese Civil Aviation company started to operate three lines linking Peking to Alma-Ata (and Moscow *via* Sverdlovsk), to Chita (*via* Ulan Bator) and to Irkutsk.

By 1947 there were 5·5 million "radio points," namely loudspeakers, installed in all public places such as factories, restaurants, clubs, schools, parks. Private receiving-sets were reserved to state and party officials only. By 1940 there were about 850,000 telephones, seven times more than before 1914, but there was still only one telephone per 200 inhabitants.

Finance. The constant expansion of the Soviet budget was not wholly accounted for by the progress of industrialization: there was also inflation which caused a continual depreciation in the purchasing power of the rouble.

TABLE V. THE SOVIET BUDGETS ('000 million roubles)

	1928	1938	1940	1948	1949	1950	1951*
Revenue	8·8	127·5	180·2	410·5	436·9	422·1	458·7
Expenditure	8·7	124·0	174·4	370·9	412·3	412·7	451·5

* Estimates.

A turnover tax, or levy on the proceeds of retail trade in all commodities, constituted three-quarters of the revenue. Every spring the government and party authorities compelled every wage earner to buy state loan bonds to a minimum of one month's wage; the fifth state loan for the restoration and development of the national economy, floated on May 3 to the amount of Rb. 20,000 million, was taken up to the extent of over Rb. 27,000 million.

On March 1, 1950, the rouble, by decision of the Soviet government, was put on what was described as a gold basis. The external value of the rouble, already much too high and completely fictitious, was raised from Rb. 5·30 to Rb. 4·00 to the U.S. dollar and from Rb. 14·84 to Rb. 11·20 to the pound.

The Statistical Office of the United Nations calculated that the national income in the Soviet Union on a per capita basis amounted in 1949 to $308 as compared with $1,453 in the U.S. and $778 in the U.K.

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(K. SM.)

UNITARIAN CHURCH. In 1950 the general assembly of the Unitarian Church in Great Britain celebrated its 21st anniversary, which coincided with the 125th of the British and Foreign Unitarian association. At the same time the American Unitarian association likewise celebrated its 125th anniversary; and the Rev. H. S. Carter and Ronald P. Jones, treasurer of the assembly, were fraternal delegates from Britain to the gatherings in Boston.

To replace buildings destroyed by enemy action in World War II, a new church at St. Helens, Lancashire, and new church halls at Poole, Dorset, and at Southampton were opened. The Wayside Pulpit posters, issued again after a lapse of some years because of paper shortage, met with a ready response. A development subcommittee prepared material for a Unitarian advance: it took a leading part in fostering a revival at Woolwich and exploratory work at Swindon and Watford; issued a pamphlet on church publicity; and began a survey of the publicity undertaken by local churches. Consultations took place with various district associations with a view to extension-work in their areas. The Rev. Margaret Barr, on leave from the Khasi Hills district of Assam, made a most successful tour of the churches before proceeding to America and Australasia.

A summer school for Sunday school teachers, held at Manchester college, Oxford, was the best-attended for 20 years. A film-strip library was inaugurated, and many schools purchased their own projectors. A series of Beacon folders, with lessons, notes, plays, festival services and suggestions for youth work, was issued quarterly. The International Religious fellowship, representing the liberal religious youth of many countries, held a conference at Great Hucklow, Derbyshire, in the summer, followed by a work camp at Barnston, in the Wirral; several representatives of German Unitarian youth attended.

The executive committee of the International Association for Religious Freedom met at Lund, in Sweden, in July. At the same time a conference was held and many valuable contacts made with Swedish, Danish and Icelandic liberal Christians. (J. KY.)

United States. The outstanding event of the year was the celebration in Boston, Massachusetts, in May of the 125th anniversary of the founding by Unitarian Churches of the American Unitarian association. The theme was "Religion for a new age of reason." Four panel discussions dealt with: (1) religion and the growth of the free mind; (2) religion and freedom in society; (3) religion and individual responsibility; (4) religion and stability in society. The assembly passed resolutions bearing directly on social and international issues, especially in the spheres of civil liberties and the way towards a peaceful world. Samuel A. Eliot received the annual award for distinguished service to the cause of liberal religion. His death occurred six months later. Unitarian churches voted overwhelmingly for the establishment of a Unitarian-Universalist commission on federal union of the two denominations. The Universalists had acted similarly and the commission was at work drawing up a plan. A 56-page issue of *The Christian Register* was devoted to Unitarian developments during the decade 1940-50, indicating that at mid-century the denomination was taking stock of itself.

H. Kishimoto, professor of the science of religion at Tokyo Imperial university, visited Unitarian headquarters to plead, "The Unitarian faith is more urgently needed in Asia than any other religious doctrine. Asiatics need a religion which gives them a spiritual basis for the political and social democracy America is preaching in Asia." The Unitarian Service committee sent a medical mission to Japan during the summer. (J. H. L.)

UNITED CHURCH OF CANADA. The United Church of Canada, which in 1925 united the Presbyterian Church in Canada, the Methodist Church (Canada) and the Congregational Churches in Canada, reported for 1949 a membership of 806,179 with 1,916,908 persons under pastoral oversight, a Sunday school enrolment of 517,222 and 6,270 preaching places. The church owned property worth $125,994,207 and raised a total of $22,591,581 for all purposes. The missionary and maintenance givings of the church in 1949 totalled $2,706,114.

Among the important events in the life of the United Church during 1950 were the contribution of $103,000 to a special student aid fund; the raising of all minister's retiring pensions by 25%; the sending of approximately $98,000 for relief to Churches in Europe and in Asia; the transfer of the church's missionary property in China to the Church of China; a definite pledge to seek organic union with the Church of England in Canada when and if that church pledges itself in like manner; and a church-wide observance of the 25th anniversary of union.

In Sept. 1950 the Rev. C. M. Nicholson of Halifax was elected moderator of the church for a two-year term; the Rev. Robert S. Christie was appointed assistant secretary of its Board of Evangelism and Social Service and Ralph C. Young secretary of its Committee of United Church Men. (G. A. SI.)

UNITED KINGDOM: *see* GREAT BRITAIN AND NORTHERN IRELAND, UNITED KINGDOM OF.

UNITED NATIONS. The further deterioration of relations between the Soviet bloc and the western nations adversely affected the United Nations during 1950. For the greater part of the year, the U.S.S.R. refused to take an active part in the work of the various organs of the U.N. on the alleged ground that China was being illegally represented by the Nationalist government. For the first time during its five years of existence the U.N. undertook the use of military force in support of its principles. For the U.N., 1950 was a time of testing in a world of mounting tension.

Membership. The membership of the U.N. was increased to 60 by the admission of Indonesia. At the end of 1950, membership was as shown in the table.

The general assembly during its fourth session had asked the International Court of Justice to give an advisory opinion on

the question of the competence of the general assembly to admit new states without a favourable recommendation by the Security council. On March 3 the court delivered an opinion in which it ruled by a vote of 12 to 2 that the general assembly could admit a state to membership only on the favourable recommendation of the Security council.

MEMBERS OF THE UNITED NATIONS, 1950

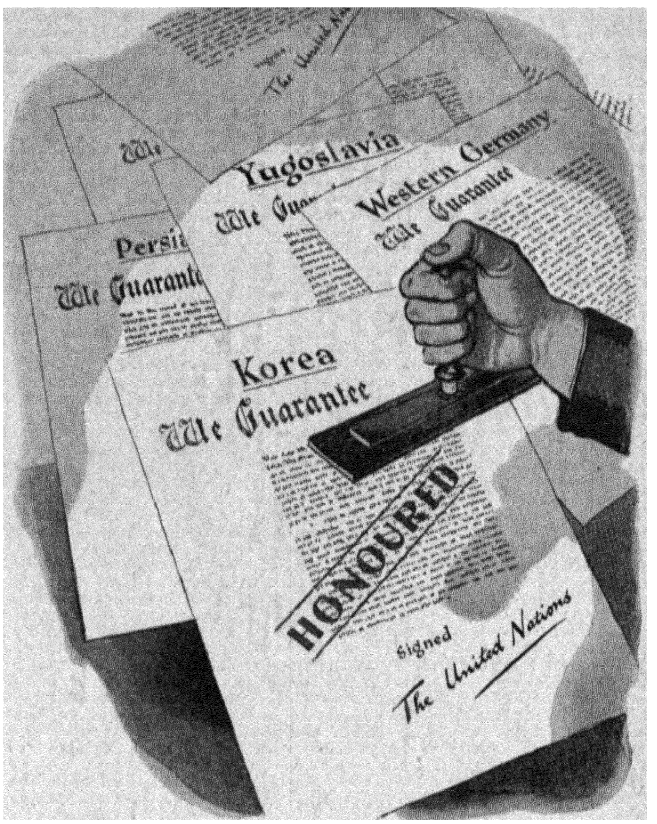
Afghanistan	Denmark	Israel	Poland
Argentina	Dominican Rep.	Lebanon	Saudi Arabia
Australia	Ecuador	Liberia	Sweden
Belgium	Egypt	Luxembourg	Syria
Bolivia	El Salvador	Mexico	Thailand
Brazil	Ethiopia	Netherlands	Turkey
Burma	France	New Zealand	Ukraine
Byelorussia	Greece	Nicaragua	Un. of S. Africa
Canada	Guatemala	Norway	U.S.S.R.
Chile	Haiti	Pakistan	United Kingdom
China	Honduras	Panama	United States
Colombia	Iceland	Paraguay	Uruguay
Costa Rica	India	Persia	Venezuela
Cuba	Indonesia	Peru	Yemen
Czechoslovakia	Iraq	Philippines	Yugoslavia

Meetings and Organization. The general assembly met for its fifth regular session at Flushing Meadow, New York, on Sept. 19. Nasrollah Entezam (*q.v.*), of Persia, was elected president. The assembly had before it an agenda of 70 items, to which other items were subsequently added. The critical situation in east Asia, resulting from North Korean aggression in June and the subsequent military intervention of the Chinese Communists, creating the danger of a general war, made it impossible for the general assembly to complete its work. On Dec. 15 the president announced that he would subsequently make a definite proposal for the final closure of the fifth session of the general assembly. At that time, the First committee had not completed its agenda. Because of the increasing scope of its work, the general assembly increased the number of its subsidiary organs. The interim committee was continued for another year.

The Security council met less frequently than during its first three years. This was in large measure the result of the continuing great-power deadlock which made substantive decisions difficult and consequently encouraged the use, where possible, of the general assembly. The absence of the Soviet representative from meetings during the first seven months further limited the work of the council, though it was by virtue of this absence that the council was able to function in the early stages of aggression in Korea. During 1950 the Security council was composed of China (represented by the Nationalist government), France, the U.S.S.R., the United Kingdom and the United States (permanent members) and Cuba, Ecuador, Egypt, India, Norway and Yugoslavia. During its fifth session the general assembly elected Brazil, the Netherlands and Turkey to succeed Cuba, Egypt and Norway. The election of Turkey marked the first break in the continuous representation of the Arab league.

The Economic and Social council held two sessions during 1950, its 10th at Lake Success, from Feb. 7 to March 6, and its 11th at Geneva, from July 9 to Aug. 16. Hernan Santa Cruz (Chile) was president during both sessions. During 1950 the council was composed as follows: with terms ending Dec. 31, 1950—Australia, Brazil, Denmark, Poland, the U.S.S.R. and the United Kingdom; with terms ending Dec. 31, 1951—Belgium, Chile, China, France, India and Peru; and with terms ending Dec. 31, 1952—Canada, Czechoslovakia, Mexico, Pakistan, Persia and the U.S. During its fifth session, the general assembly elected the following to membership for three-year terms ending Dec. 31, 1953: the Philippines, Poland, Sweden, the U.S.S.R., the United Kingdom and Uruguay.

The Trusteeship council held two sessions during 1950, the sixth at Geneva, Jan. 19 to April 4, and the seventh at Lake Success, June 1 to July 21. Roger Garreau (France) was president for the sixth session and Max Henriquez Urena (Dominican Republic) for the seventh. The membership of the council during 1949 was as follows: members administering trust territories—Australia, Belgium, France, New Zealand, the United Kingdom and the U.S.; members by virtue of permanent seats in the Security council—China and the U.S.S.R.; and members elected by the general assembly—Argentina, Dominican Republic, Iraq and the Philippines. In its fifth session the general assembly re-elected the Dominican Republic, whose term expired Dec. 31, for a three-year term, and elected Thailand for a three-year term, beginning Jan. 1, 1951, to take the place of the Philippines.



"The Portent" by Illingworth, published in Oct. 1950 in "Punch" (London).

Some notable developments occurred in the organization and functioning of the secretariat. Early in 1950, Trygve Lie (*q.v.*) the secretary general, asserted a strong political initiative in formulating a 20-year programme of peace, which subsequently was the subject of negotiations with the governments of members, including the great powers. The outbreak of violence in Korea created conditions unfavourable to the success of this initiative. On March 1, 1950, the secretary general announced the establishment of the U.N. field service as authorized by a resolution adopted by the general assembly in its fourth session. The administrative tribunal adopted its rules of procedure on June 7 and handed down its first decision on June 30. Since Lie's original term of office was due to expire on Feb. 2, 1951, it became necessary for the Security council and the general assembly to consider the appointment of a successor. Failing agreement of the permanent members of the Security council, the general assembly on Nov. 1 adopted a resolution extending Lie's term of office for three years.

The secretary general's budget estimates for 1951 provided for a total expenditure of $45,450,800, compared with an approved budget of $41,641,773 for 1950 (exclusive of $8



Sir Gladwyn Jebb (United Kingdom) at the Security council in June 1950. He had just succeeded Sir Alexander Cadogan as Britain's permanent representative at the United Nations. The U.S.S.R. place was vacant during a seven-month boycott of the council.

million for Palestine). The Advisory Committee on Administrative and Budgetary Questions recommended a reduction of $1,623,800. The general assembly approved appropriations for 1951 totalling $47,798,600, and voted to maintain the working capital fund at $20 million. Estimated miscellaneous income of more than $6 million left a total of $41,277,600 to be raised by contributions of members. The scale of assessments was revised, the most significant features being slight increases in the contributions of India and the U.S.S.R. and a slight decrease (0·87%) in the contribution of the U.S.

Construction of the new secretariat building in Manhattan, New York, was completed and personnel was moved from Lake Success to Manhattan during late 1950 and early 1951. The contract for the construction of the general assembly auditorium was signed on June 30.

Political Problems. During 1950, the U.N. still had before it such questions as Indonesia (*q.v.*), Palestine, Kashmir (*q.v.*) and the Balkans (*see* GREECE). In June, however, Korea and related problems in the far east came to dominate the picture and occupy a large part of the attention of the U.N.

Palestine. The question of Palestine was a matter of continuing concern to the U.N. in 1950. In February the chief of staff of the Truce Supervision organization, Brig. Gen. W. E. Riley, reported to the Security council that the work of the four commissions had thus far been remarkably successful. However, there continued to be numerous complaints of violation of these agreements.

The refugee question proved an insoluble problem and was a major factor blocking a political settlement. (*See* REFUGEES.)

The question of the future status of Jerusalem (*q.v.*) had been considered by the general assembly in its fourth session, and a resolution adopted providing for the setting up of the city as a *corpus separatum* with the United Nations Trusteeship council as administering authority. The council was asked to draft a statute which it undertook to do during its sixth and seventh sessions. The council was unable, however, to get the co-operation of Israel and Jordan and, consequently, referred the matter back to the general assembly. The matter was considered by the general assembly in its fifth session, but the necessary two-thirds vote could not be mustered for any proposal under consideration.

Korea: the Major Challenge. Developments in Korea offered the major challenge to the U.N. in the discharge of its responsibilities to maintain international peace and security. The general assembly at its fourth session had voted to continue the U.N. Commission for Korea for another year, authorizing it particularly to report on border violations in view of the tension between the People's Democratic Republic of Korea (North Korea) and the Republic of Korea (South Korea). Late in the evening of June 24 the secretary general was informed of attacks launched by North Korean forces against South Korea. On the afternoon of June 25 (Sunday) an emergency meeting of the Security council was held with the Soviet representative absent. A resolution based on a draft introduced by the U.S. representative, was adopted determining the action to constitute a breach of the peace, calling for the immediate cessation of hostilities and the withdrawal of North Korean armed forces to the 38th parallel, requesting the U.N. commission in Korea to observe and report and calling upon members to give every assistance in the execution of the resolution. Since reports from the U.N. commission gave clear evidence that the North Korean military attack was deliberate and unprovoked and that the North Korean authorities were not willing voluntarily to withdraw their forces or accept the good offices of the commission, the Security council proceeded on June 27 to the adoption of a resolution, again based on a U.S. proposal, recommending that members furnish such assistance to the Republic of Korea as might be necessary to repel the armed attack and restore international peace and security. Earlier the same day President Harry S. Truman had announced that U.S. forces would proceed to the assistance of the Republic of Korea. On July 7, the Security council recommended that members make forces and assistance available to a unified command, requested the U.S. to designate the commander, authorized the use of the U.N. flag and requested the U.S. to provide the Security council with reports on the course of action. On Aug. 1, Yakov A. Malik (*q.v.*), the Soviet representative returned to the Security council and assumed the presidency. During the month of August the council was involved in procedural tangles and was unable to take substantive decisions, but since resolutions had been adopted providing the basis for necessary U.N. military operations, the effectiveness of enforcement action did not suffer. Malik maintained that the early decisions of the Security council were invalid because taken in the absence of the Soviet representative and with the "legal"

government of China (the Communist) not represented.

By the time the general assembly convened for its fifth session in September, the military situation in Korea had changed to such an extent that, in spite of early reversals, it seemed likely that the U.N. forces might succeed in driving the Communists out of all Korea, if given the authority to do so. After extended discussion a resolution was adopted on Oct. 7, recommending that all appropriate steps be taken to ensure conditions of stability throughout Korea, that constituent acts be taken under U.N. auspices for the establishment of a unified, independent and democratic government in Korea, that U.N. forces should not remain in Korea for a longer time than required to achieve these objectives and that all necessary measures be taken to achieve the economic rehabilitation of the country. A Commission for the Unification and Rehabilitation of Korea was set up, to take over the duties of the U.N. Commission for Korea and to assist in the achievement of these purposes.

U.N. forces under General Douglas MacArthur (*q.v.*) crossed the 38th parallel and undertook to achieve the military unification of Korea. The intervention of the Chinese Communists, however, prevented this objective from being achieved and in fact confronted the U.N. with the threat of an extension of hostilities which might develop into a world war. The presence of organized Chinese forces was first reported by General MacArthur on Nov. 4.

The intervention of Communist China came as no surprise to many. The U.N. organs had refused to seat representatives of the Communist government earlier in the year, continuing to accept representatives of the Nationalist government when that government was reduced to control of the island of Formosa. President Truman had announced on June 27 that U.S. forces would prevent the Chinese Communists from attacking Formosa. On Aug. 25 the Soviet representative on the Security council requested that the U.S. "armed invasion" of Formosa be considered by the Security council. Chou En-lai (*q.v.*), the Chinese Communist foreign minister, had publicly warned (Sept. 30) of the consequences of sending U.N. military forces into North Korea.

The intervention of the Chinese Communists presented new issues upon which there was not the same agreement among member delegations as there had been on action to meet the original North Korean aggression. At the time the complaint of U.S. invasion of Formosa was placed on the Security council agenda, a Soviet motion that a representative of the Chinese Communist government should be invited to take part in the discussions was defeated. Later, the council reversed its position, and the Communist government accepted an invitation to be represented. When General MacArthur's report on Chinese intervention was before the council, a resolution was adopted inviting the Communist government to be represented when this question was being discussed. A delegation headed by General Wu Hsiu-chuan arrived in New York on Nov. 24. On Nov. 27 the council considered the complaint of U.S. "armed invasion" of Formosa and the complaint of aggression against the Republic of Korea. The representative of the Chinese Communist government was invited to participate in the discussions and made a lengthy statement, charging the United States with imperialism. On Nov. 30, a Soviet veto defeated a six-power resolution, calling upon all states and authorities to refrain from assisting or encouraging the North Korean forces and to cause the immediate withdrawals of nationals or units with the North Koreans in Korea, and affirming it to be the policy of the U.N. to hold the Chinese frontier with Korea inviolate.



Yakov Malik of the Soviet Union addressing the Security council during his term as president of the council, Aug. 1950.



On Nov. 27, 1950, General Wu Hsiu-chuan, of the Chinese Communist government attended a meeting of the Security council for the first time during the council's discussion on Formosa and Korea. General Wu is seen on left, next to Sir Benegal Rau of India.

Four days later, on Dec. 4, the general assembly was asked to place the question of Chinese intervention on its agenda, which the assembly voted to do on Dec. 6. On Dec. 14, the assembly adopted a resolution sponsored by 13 Asiatic and Arab states requesting the president to constitute a group of three persons, including himself, to determine the basis on which a satisfactory cease-fire in Korea could be arranged. General Wu insisted that before there could be a cease-fire the U.N. must guarantee to meet Communist China's demands for the immediate evacuation of U.N. troops from Korea, withdrawal of the U.S. fleet from Formosan waters and the acceptance of the Communist government as representing China in the U.N. On Dec. 19, the Chinese Communist delegation left New York. The reply of the Chinese Communist government to proposals of the cease-fire group followed the lines of Wu's statement. As the year ended, the cease-fire group had not succeeded in its objective. Members of the U.N. were in disagreement as to the next step.

As a direct consequence of the Korean experience, Dean Acheson, U.S. secretary of state, proposed to the general assembly a plan for strengthening the U.N. in the maintenance of international security. Based on the premise that in a future comparable situation circumstances might not be such as to permit the Security council to act promptly and effectively, the proposal involved strengthening the general assembly as an organ of enforcement action in case the Security council failed to discharge its responsibilities. On Nov. 3, the general assembly adopted a resolution (Uniting for Peace), based on a United States draft, which provided that if the Security council, because of the lack of unanimity of its permanent members, failed to exercise its primary responsibility for the maintenance of peace, the general assembly might consider the matter immediately with a view to making recommendations, that these measures might include the use of armed force when necessary, that if not in session the general assembly might meet in emergency special session within 24 hours at the request either of the Security council or of a majority of the U.N. members, that a Peace Observation commission be established to observe and report in areas of international tension, that members include within their armed forces elements trained, organized and equipped for service as U.N. units, and that a Collective Measures committee be set up to consider and recommend measures to be taken. The general assembly also adopted resolutions recommending that the Security council devise measures for the earliest application of charter provisions for placing armed forces at the disposal of the Security council and that the permanent members of the Security council meet and discuss problems likely to threaten peace with a view to resolving fundamental differences. On the basis of a Yugoslav proposal, the general assembly adopted a resolution on Nov. 14, stating that a nation becoming involved in armed conflict should, within 24 hours, proclaim its readiness, if its opponent does likewise, to discontinue military operations and withdraw its forces. (*See* KOREAN WAR.)

Economic and Social Co-operation. The activities of the principal and subsidiary organs of the U.N. during 1950 covered a wide range of matters. The most important were economic development, technical assistance, full employment and economic stability, human rights, freedom of information and refugees and stateless persons.

The question of the economic development of underdeveloped areas was considered by the Economic and Social council at its two sessions. The financing of economic development received special consideration from the Subcommission on Economic Development. In its discussions the Economic and Social council recognized the close relation between economic development and full employment. It also emphasized the need of utilizing private capital as well as public funds, and the importance of carefully planned programmes. It stressed the importance of a maximum effort on the part of the peoples of the underdeveloped areas, as well as of financial and technical assistance from outside. The general assembly, accepting the general conclusions of the council, called attention to the need to study the extent to which agrarian conditions interfered with economic development and the special problems connected with the development of arid areas.

Considerable progress was made during 1950 in organizing and carrying out the expanded technical assistance programme adopted by the general assembly in its fourth session. The Technical Assistance board had its first meeting at Lake Success, Feb. 23-24, and made preparations for the Technical Assistance conference. The conference met at Lake Success during June 12-14. Forty-five member states, nine nonmember states, ten specialized agencies and the Organization of American States were represented. Resolutions were adopted dealing with contributions of governments to the expanded programme of technical assistance and concerning the allocation of funds among the participating organizations. Pledges of contributions from governments of about $20 million for the period ending Dec. 31, 1951, were received. Up to the end of 1950, 245 requests for technical assistance had been received from about 50 governments. More than 40 agreements with governments had been signed.

The international protection of human rights was a matter of continuing concern during 1950. Attention was largely focused on the drafting in an International Covenant on Human Rights, though related subjects came in for consideration. The Commission on Human Rights opened its sixth session on March 27 with the draft International Covenant on Human Rights and its implementation the leading item on its agenda. The commission undertook an article-by-article revision of the covenant in the course of which serious disagreements arose over the inclusion of provisions relating to economic and social rights, procedure for the handling of complaints and other matters. When the Economic and Social council considered the commission's report in its 11th session, it decided to submit certain controversial issues to the general assembly for its decision. The general assembly expressed dissatisfaction with the covenant as it stood, requested the commission to prepare recommendations for securing the maximum extension of the provisions of the covenant to constituent members of federal states, directed that economic, social and cultural rights be included and expressed itself in favour of the international consideration of private petitions.

The question of freedom of information was considered by the Sub-commission on Freedom of Information and of the Press and the Economic and Social council. The subcommission, meeting at Montevideo, Uruguay, May 15 to 26, was concerned primarily with the drafting of an international code of ethics. It also adopted a number of resolutions relating to freedom of information and the press, which were subsequently adopted in substance by the Economic and Social council. The general assembly, declaring freedom of information and the purposes of the U.N. indivisible, laid down a new programme of work for achieving the desired end. It established a 15-member committee to meet not later than March 1, 1951, to examine the draft approved by the 1948 conference on Freedom of Information and other texts and to prepare draft conventions and submit its recommendations to the Economic and Social council. The general assembly also adopted a resolution condemning the practice of radio jamming.

The matter of refugees and stateless persons was considered by an *ad hoc* committee of the Economic and Social council which met at Lake Success on Jan. 16. The committee prepared a draft convention on the status of refugees, together with a protocol rendering applicable to truly stateless persons, whether or not refugees, the appropriate provisions. This draft was transmitted to the Economic and Social council. As subsequently revised by the *ad hoc* committee it was submitted to the general assembly. The general assembly decided to convene a conference to complete and sign a convention relating to the status of refugees and a protocol relating to the status of stateless persons.

Specialized Agencies. An important, if not the most important, part of the work during 1950 in the area of international economic and social co-operation was performed by the specialized agencies, international organizations set up on the basis of their own constitutions for specialized purposes and brought into relation with the U.N. by agreements concluded by the appropriate organs of the U.N. and the particular specialized organizations in question. During 1950, the following specialized agencies were in operation:

International Labour Organization (I.L.O.): headquarters at Geneva; David A. Morse, director general; 62 members. (*See* separate article.)

Food and Agriculture Organization (F.A.O.): headquarters in Rome; Norris E. Dodd, director general; 68 members. (*See* FOOD SUPPLY OF THE WORLD.)

International Monetary Fund (*q.v.*): headquarters in Washington; Camille Gutt, managing director; 49 members.

International Bank for Reconstruction and Development (*q.v.*): headquarters in Washington; Eugene R. Black, president; 49 members.

International Civil Aviation Organization (I.C.A.O.): headquarters in Montreal; Edward Warner, president of the council; 58 members. (*See* AVIATION CIVIL.)

International Refugee Organization (I.R.O.): headquarters at Geneva; J. Donald Kingsley, director general; 18 members. (*See* REFUGEES.)

United Nations Educational, Scientific and Cultural Organization (U.N.E.S.C.O.): headquarters in Paris; Jaime Torres Bodet, director general; 59 members.

World Health Organization (W.H.O.): headquarters at Geneva; Brock Chisholm, director general; 74 members and one associate member.

International Telecommunications Union (I.T.U.): headquarters at Geneva; Leon Mulatier, secretary general; 81 members (includes colonial areas).

Universal Postal Union (U.P.U.): headquarters at Berne, Switzerland; Fritz Hess, director of the international bureau; 86 members (includes colonial areas).

World Meteorological Organization (W.M.O.): convention in force but organization not completed. (*See* METEOROLOGY.)

Aid to Non-Self-Governing Peoples. The work of the U.N. in this field during 1950 came under three principal heads: (1) action taken under chapter XI of the charter to improve conditions in non-self-governing territories generally; (2) action taken in connection with the administration of the trusteeship system; (3) action taken under other provisions of the charter or in the discharge of responsibilities conferred by separate international agreements.

The special committee on information transmitted under article 73(e) of the charter, created by the general assembly to consider and report on information submitted to the secretary general, met from Aug. 18 to Sept. 12. In considering the information submitted to it by the secretary general, the committee gave special attention to the problems of education in non-self-governing territories, with special emphasis on the development of training in the economic and social fields. The committee reached the conclusion, embodied in its report to the general assembly, that the eradication of illiteracy was a problem of the utmost urgency. The general assembly endorsed this conclusion.

During 1950 the trusteeship system was further extended, developed and refined in its actual operation. In its sixth and seventh session the Trusteeship council drafted a trusteeship agreement for the former Italian colony of Somaliland (*q.v.*). The general assembly approved this agreement, placing the territory under the administration of Italy as a trust territory. The Trusteeship council also considered reports from the administering authorities, covering Tanganyika, Western Samoa, Ruanda-Urundi, the Cameroons (British and French), Togoland (British and French), New Guinea, Nauru and the Pacific islands. The council received and considered reports of visiting missions to the Cameroons and Togoland, completed arrangements for a visiting mission to the trust territories in the Pacific and decided to send a visiting mission to east Africa in 1951. It also received and examined more than 350 petitions, including petitions relating to the unification of Eweland. (The Ewe people, more than 800,000 in number, are west Africans, have a common language, tradition and customs, but were divided by political boundaries of three territories—the two trust territories of British Togoland and French Togoland and the British colony of the Gold Coast.) On the basis of a report of its Committee on Administrative Unions, the council decided to establish a standing committee to examine regularly the operation of administrative unions. Taking note of recommendations adopted by the general assembly in its fourth session, the council adopted a resolution recommending that administering authorities abolish corporal punishment and whipping in all trust territories and urging all administering authorities to take necessary measures to insure the absence in trust territories of discriminatory laws and practices contrary to the charter or trust agreements. The general assembly, in its fifth session, on the basis of the Trusteeship council's report and recommendations, adopted resolutions requesting the council to study laws, policies and practices in trust territories relating to the utilization and alienation of land and to make recommendations to the administering authorities with respect to land policies and practices which would contribute to the economic and social development of the indigenous population.



On United Nations day, Oct. 24, 1950, President Harry S. Truman and Mrs. Truman visited the U.N. general assembly, and were greeted on board their train by (left to right) Dean Acheson, Warren Austin, Nasrollah Entezam and (extreme right) Trygve Lie.

By the terms of the Italian peace treaty, the general assembly had been asked to determine the disposition of the Italian colonies in Africa. Decisions had been taken by the general assembly in 1949 which largely determined the final disposition of these territories though the final decision on Eritrea awaited the report of a special commission. Without a dissenting vote the general assembly adopted a programme for the establishment of an independent Libya. The programme provided for the convening of a Libyan national assembly not later than the beginning of 1951, the establishment of a provisional government by April 1, 1951, and the progressive transfer of authority by Great Britain and France, the process to be completed by Jan. 1, 1952. The programme for the transfer of authority was to be drawn up by the U.N. commissioner in Libya, aided by the Council for Libya. The assembly recommended that the Economic and Social council, in conjunction with the specialized agencies and the secretary general, extend to Libya such financial and technical aid as might be needed to establish the country on a sound economic and social basis. The assembly also recommended that Libya, once it had achieved independence, be admitted to the U.N.

On the future disposition of Eritrea, the members of the U.N. commission on Eritrea, established by the general assembly in 1949, were in disagreement. Nor was the interim committee, to which the commission reported, able to come to

a decision. The general assembly decided on Dec. 2 that Eritrea should be federated with Ethiopia as an autonomous unit. The plan provided for a transitional stage, ending not later than Sept. 15, 1952, during which an Eritrean government was to be organized and a constitution put into effect, Great Britain to continue to conduct Eritrea's affairs in the interim period.

The question of the status of South-West Africa was also before the U.N. during 1950 as the result of the refusal of the Union of South Africa to submit a trusteeship agreement and to make reports on the administration of the territory to the U.N. The International Court of Justice in an advisory opinion, while admitting that the Union was under no legal obligation to place the territory under trusteeship, nevertheless, upheld the U.N. position that the mandate continued in force and that the Union government must hold itself accountable to the U.N. for the administration of the territory. The general assembly reaffirmed its earlier position and set up a five-member committee to confer with the Union government on matters relating to the advisory opinion.

See L. M. Goodrich and E. J. Hambro, *Charter of the United Nations: Commentary and Documents*, 2nd rev. ed. (Boston, 1949); H. Kelsen, *The Law of the United Nations* (London, 1950). (L. M. GH.)

UNITED STATES OF AMERICA. Republic in North America composed of 48 separate and (theoretically) sovereign states united by a federal government; fifth largest country of the world in area (after the U.S.S.R., China, Canada and Brazil), fourth in population (after China, India and the U.S.S.R.), but foremost as to industrial production and financial resources; bounded N. by Canada (the 49th parallel forming the western section of the boundary which follows the general line of the Great Lakes at the eastern end), S. by Mexico, E. by the Atlantic ocean (air distance, New York-London, 3,400 mi.), and W. by the Pacific ocean (air distance, Seattle-Yokohama, 4,800 mi.). Area of continental U.S. (land only): 2,977,128 sq.mi.

Pop.: (April 1, 1940, census) 131,669,275; (April 1, 1950, census) 150,697,361. In 1940 the population included 118,214,870 whites (89·8%), 12,865,518 Negroes (9·8%), 333,969 Indians (0·3%), 126,947 Japanese, 77,504 Chinese, 45,563 Filipinos and 4,904 other non-whites. The number of foreign-born whites decreased from 13,983,405 (12·7% of the total) in 1930 to 11,419,138 (9·7%) in 1940; about 15 million U.S. white citizens were persons with both parents foreign-born; about 5 million had only the father foreign-born and about 3 million only the mother foreign-born. Total foreign white stock in 1940 numbered 34,576,718. The German foreign white stock was the largest (5,236,612), followed by the Italian (4,394,780) and the Polish (2,905,859); other countries contributing more than two million were Russia, Ireland and Canada, with England just under this figure (1,975,975). From 1940 to 1950 there was a great westward movement of the population: during this period the state of California showed a net gain of 52·3%, Oregon of 39·6% and Washington of 37%; Arkansas, Mississippi, North Dakota and Oklahoma lost slightly; Arizona, Florida, New Mexico and Utah gained 50·1%, 46·1%, 28·1% and 25·2% respectively. (*See* Table on p.655.)

In 1948 there were in the U.S. 53 religious bodies of more than 50,000 members, with a total of 75,371,100 members. Though Protestants as a group outnumbered Roman Catholics by almost two to one, the Roman Catholic Church, with a total of 25,268,200 (35% of the total, mainly Americans of Irish, Italian, Polish and German extraction) was far ahead of any single denomination. The nine Baptist bodies numbered 15,230,000 (including more than four million Negroes); four Methodist bodies 10,337,700 (including about 1,770,000 Negroes); seven Lutheran bodies (mainly Americans of German or Scandinavian extraction) 3,098,500; four Presbyterian bodies 3,127,000; Protestant Episcopal Church 2,160,200. The largest non-Christian congregation was Jewish (4,641,000).

Chief towns (pop. first figure 1940 census; second figure 1950 census): Washington, D.C. (cap., 663,091; 802,178); New York (*q.v.*) (7,454,995; 7,841,023); Chicago (3,396,808; 3,631,835); Philadelphia (1,931,334; 2,057,210); Los Angeles (1,504,277; 1,954,036); Detroit (1,623,452; 1,837,613); Baltimore (859,100; 939,865); Cleveland (878,336, 909,546); St. Louis (816,048, 852,253); Boston (770,816; 788,552).

President of the United States, Harry S. Truman (*q.v.*); vice-president, Alben W. Barkley. At the end of 1950 the U.S. cabinet was as follows:

Secretary of State	Dean G. Acheson (*q.v.*)
Secretary of Defence	George C. Marshall (*q.v.*)
Secretary of the Treasury	John W. Snyder
Attorney General	J. Howard McGrath
Postmaster General	Jesse M. Donaldson
Secretary of the Interior	Oscar L. Chapman
Secretary of Agriculture	Charles F. Brannan
Secretary of Commerce	Charles Sawyer
Secretary of Labour	Maurice J. Tobin

History. As the year opened the mood of the country was one of stock taking, as was natural at mid-century. Estimates of population increase, and of distribution of new population, had been much discussed in the closing months of 1949. Lengthy preparation for the census of 1950 had been made in Washington and throughout the country. On April 1 approximately 140,000 enumerators began the gigantic task of interviewing the individual citizen and reporting upon his replies to more questions than had ever before been asked by the census bureau. Early in November the final figures for the 1950 populations for the states became available. They showed that the population of the United States on April 1, 1950, was 150,697,161—a gain of slightly more than 19 million in the decade. The preliminary reports, and in some cases rumours based upon them, were of intense interest to business and labour and particularly to chambers of commerce. In late August the Census bureau, in a statement on the growth in the 12 largest cities, reported that rate of growth in the suburban areas of those cities was higher than in the cities themselves. In December the report showed 427 cities with a population of more than 25,000.

In an election year, although only for members of the House and one-third of the Senate, the leadership of the president was of primary interest. In his message to the congress of Jan. 4, he called again for the enactment of his " fair deal " programme. This included a wider extension of social security benefits, protective legislation in matters involving civil rights, a repeal of the Taft-Hartley act and acceptance of higher taxes. Within a week he submitted the largest peacetime budget in the history of the U.S. and later in the month he was more specific in additional appeals in terms of national defence. His April 7 special message gave particulars of a wide extension of social security benefits including medical care and educational opportunity. The congress passed bills embodying some of these proposals, but not until late August was the social security legislation signed. Meanwhile, in May, the president had presented to the congress a plan for aids to " small business." On the whole, the response of the congress to the appeals of the president was slow, and it was apparent that his own party in the congress was far from unified in support of any one of the principal proposals. By June 1 it was an accepted fact that politics in the election year would play havoc with any rapid enactment of constructive legislation. The one exception to be noted later was the acceptance of governmental reorganization based upon reports of the Hoover commission.

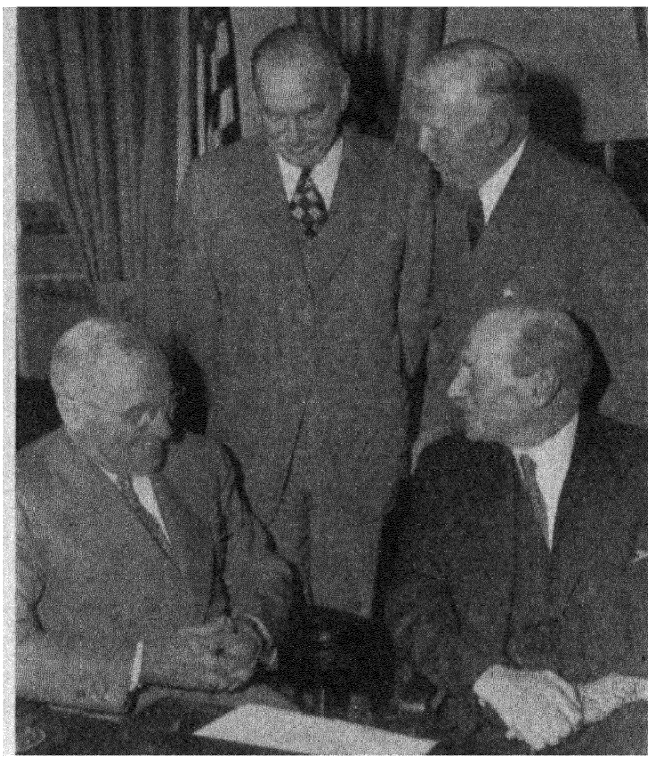
Moreover, the attention of the country was taken up not with expectation of congressional action upon the president's proposals but with the continued upward trend of prices, the effect of this on the value of the dollar, increased public buying of stocks, the growing unity in the demands of union labour for advances in wages and improvement of working conditions and the patent and distressing disharmony in the branches of the armed services. Yet there was a general optimism on the business outlook.

The congressional delay on the bills for the admission of Hawaii (*q.v.*) and Alaska (*q.v.*) as states dragged through the year. Despite very general approval, both in the country and in congress, and an increasing feeling in some quarters that this was a crucial political and military issue, no final action was taken.

As was expected, the crux of politics in an election year was found in the attitudes, policies and actions of organized labour. An epidemic of critical strikes began early in the year with a strike against the Chrysler company. The long standing strike of the United Mine Workers led to a citation for contempt of court despite John L. Lewis's direction to the miners on Feb. 12 to return to work, but under protest. The strike was settled on March 12. In mid-May the Brotherhood of Locomotive Trainmen and Engineers went on strike against four major railway companies. The initial strike was quickly settled, but a recurrence and a threatened widening of the strike caused President Truman to take over the railways on Aug. 25. This did not solve the problem, inasmuch as "wild cat" strikes occurred from time to time and in early December reached such proportions on four major railways that there was serious interference with the crucial shipment of military supplies. Truman's denunciation of this action of individual union members and his appeal to them to refrain from "absenteeism" led to a resumption of work, but the basic problem remained unsolved.

By May 25, the deadline provided in the law, 16 of the 21 plans for the reorganization of the federal government submitted to the congress by the president had gone into effect. These were the outgrowth of the Hoover commission reports and credit was given, as well, to numerous "citizens' committees" which had been organized to push this matter to a conclusion.

Foreign Policy. Meanwhile, for the first six months of the year the foreign policy of the administration followed the lines laid down in the previous year. The greatest problem, realized to the full only part of the time, was how to maintain the position of the United States in the world *vis-à-vis* the Soviet Union. Two indeterminate factors were always present: (a) the changing tactics of Soviet foreign policy and (b) the uncertain party situation in the U.S. It is to be recalled that the mission of Mme. Chiang Kai-shek, which had lasted more than a year, came to an end on Jan. 10. Her appeals on behalf of the Nationalist government of China had been rejected by the president. On Jan. 5 Truman stated that



Clement Attlee (right) with President Truman in Washington in Dec. 1950. Behind are Dean Acheson (left) and George Marshall.

THE STATES OF THE UNITED STATES OF AMERICA
THEIR POPULATIONS, AREAS AND CAPITALS

State	Population 1950 Census	Population 1940 Census	Land Area 1940 (sq.mi.)	Capital City
Alabama (Ala.)	3,061,743	2,832,961	51,078	Montgomery
Arizona (Ariz.)	749,587	499,261	113,580	Phoenix
Arkansas (Ark.)	1,909,511	1,949,387	52,725	Little Rock
California (Cal.)	10,586,223	6,907,387	156,803	Sacramento
Colorado (Colo.)	1,325,089	1,123,296	103,967	Denver
Connecticut (Conn.)	2,007,280	1,709,242	4,899	Hartford
Delaware (Del.)	318,085	266,505	1,978	Dover
Florida (Fla.)	2,771,305	1,897,414	54,262	Tallahassee
Georgia (Ga.)	3,444,578	3,123,723	58,515	Atlanta
Idaho (Ida.)	588,637	524,873	82,808	Boise
Illinois (Ill.)	8,712,176	7,897,241	55,947	Springfield
Indiana (Ind.)	3,934,224	3,427,796	36,205	Indianapolis
Iowa (Ia.)	2,621,073	2,538,268	55,986	Des Moines
Kansas (Kan.)	1,905,299	1,801,028	82,113	Topeka
Kentucky (Ky.)	2,944,806	2,845,627	40,109	Frankfort
Louisiana (La.)	2,683,516	2,363,880	45,177	Baton Rouge
Maine (Me.)	913,774	847,226	31,040	Augusta
Maryland (Md.)	2,343,001	1,821,244	9,887	Annapolis
Massachusetts (Mass.)	4,690,514	4,316,721	7,907	Boston
Michigan (Mich.)	6,371,766	5,256,106	57,022	Lansing
Minnesota (Min.)	2,982,483	2,792,300	80,009	St. Paul
Mississippi (Miss.)	2,178,914	2,183,796	47,420	Jackson
Missouri (Mo.)	3,954,653	3,784,664	69,270	Jefferson City
Montana (Mont.)	591,024	559,456	146,316	Helena
Nebraska (Neb.)	1,325,510	1,315,834	76,653	Lincoln
Nevada (Nev.)	160,083	110,247	109,802	Carson City
New Hampshire (N.H.)	533,242	491,524	9,024	Concord
New Jersey (N.J.)	4,835,329	4,160,165	7,522	Trenton
New Mexico (N. Mex.)	681,187	531,818	121,511	Santa Fe
New York (N.Y.)	14,830,192	13,479,142	47,929	Albany
North Carolina (N.C.)	4,061,929	3,571,623	49,142	Raleigh
North Dakota (N.D.)	619,636	641,935	70,054	Bismarck
Ohio (O.)	7,946,627	6,907,612	41,122	Columbus
Oklahoma (Okla.)	2,233,351	2,336,434	69,283	Oklahoma City
Oregon (Oreg.)	1,521,341	1,089,684	96,350	Salem
Pennsylvania (Pa.)	10,498,012	9,900,180	45,045	Harrisburg
Rhode Island (R.I.)	791,896	713,346	1,058	Providence
South Carolina (S.C.)	2,117,027	1,899,804	30,594	Columbia
South Dakota (S.D.)	652,740	642,961	76,536	Pierre
Tennessee (Tenn.)	3,291,718	2,915,841	41,961	Nashville
Texas (Tex.)	7,711,194	6,414,824	263,644	Austin
Utah	688,862	550,310	82,346	Salt Lake City
Vermont (Vt.)	377,747	359,231	9,278	Montpelier
Virginia (Va.)	3,318,680	2,677,773	39,899	Richmond
Washington (Wash.)	2,378,963	1,736,191	66,977	Olympia
West Virginia (W. Va.)	2,005,552	1,901,974	24,090	Charleston
Wisconsin (Wis.)	3,434,575	3,137,587	54,715	Madison
Wyoming (Wyo.)	290,529	250,742	97,506	Cheyenne
District of Columbia (D.C.)	802,178	663,091	61	—

the U.S. would not defend Formosa, and inasmuch as Herbert Hoover, Robert Taft and others stated that they favoured holding Formosa, it became a matter of partisan discussion which affected all decisions in matters involving the far east. Eight days after the president's statement the Communist government of China seized the U.S. consular offices in Peking and Dean Acheson, secretary of state, asked all U.S. consular officers to withdraw from China.

On the last day of January the president announced that he had asked the Atomic Energy commission to produce the hydrogen bomb. This served to intensify the debate in congress and in the country on foreign policy, and in particular on the technical bases of military supremacy and an over-all programme for peace and security. The Joint Congressional Committee on Atomic Energy approved the decision of the president, and scientists on the whole were in accord. It was apparent that a considerable body of the people approved but with misgivings.

In March the first shipment of arms, in accordance with the agreement previously reached, was sent to western European nations. Comment upon this, as a primary policy of the administration, ceased for a time when on March 17 Acheson, in an address at Berkeley, California, outlined a seven-point programme of possible agreement with the Soviet Union as a basis for peaceful coexistence and the end of the "cold war." Lack of favourable response by Moscow explained the charge of the president, a month later, that it was apparent that the Soviet Union was fomenting revolution throughout the world and definitely preparing for war. He asked of the congress the appropriation of $260 million for the immediate development of the hydrogen bomb.

Foreign policy was discussed in terms of defence. It was pointed out that about three-fourths of the national budget for the fiscal year 1951 would be for past wars and the preparation for war. This led to vigorous debate on the "cuts" proposed by Louis Johnson, secretary of defence. The president, as well as Johnson, claimed that the proposed cuts would not affect adversely the fighting units. But in March, testifying before a congressional committee, General Dwight D. Eisenhower (*q.v.*) recommended increases of $500 million in the proposed budget. At this time he pointed out as well the great necessity of protecting the approaches to Alaska. The debate in congress and in the country emphasized growing American restiveness at what was termed western European lack of preparation for defence. Adverse critics in the U.S. pointed towards the mood of resignation expressed by European liberals, the lack of interest in Western Germany in democratic education, the hesitant attitude of a large section of the British Labour party and growing French disunity.

American Communism. As in the previous year, the people were much concerned with the evidence of Communism or sympathy with Communism within the United States. J. Edgar Hoover in April testified that there were 55,000 party members in the U.S., but 500,000 fellow travellers. Late in January Alger Hiss was convicted of perjury in the case arising from charges made by a former Communist, Whittaker Chambers. This led to renewed activity on the part of those who felt that the charges in this case had been only the beginning of a widespread conspiracy. In March, Judith Coplon, a former employee of the Department of Justice, was convicted of attempted espionage. And in April, after a trial lasting four months, Harry Bridges, for long the leader in the Longshoremen's union, was convicted of perjury in denying that in 1935 he had been a member of the Communist party.

Meanwhile, in February, Senator Joseph McCarthy (*q.v.*) of Wisconsin began in the Senate a series of attacks, which were later repeated elsewhere, upon "Communists in the State Department." Late in the month a Senate committee was appointed to investigate these charges and early in March began its hearings. These excited widespread attention. The president denounced McCarthy's charges and the individuals whom McCarthy named as Communists were vigorously defended. Seth W. Richardson, chairman of the Loyalty Review board, testified that 10,000 investigations of government employees in a three-year period had produced no case of espionage. On July 18 the Senate committee reported the charges of McCarthy had not been proved.

Impact of the Korean War. When the year began, the chances of an outbreak of general war seemed remote. But in the second half of the year a growing pessimism led to a general acceptance of war not only in Asia but in Europe, and to a resignation to conditions of life forced upon the American people by the state of the world outside the borders of the United States.

Throughout the late summer and early autumn, all discussions of international developments were held in the uncertain atmosphere produced by developments in Korea. The seeming success of united effort covered an actual situation of increasing apprehension. In mid-December Thomas E. Dewey, President Truman and Herbert Hoover, in the order named, broadcast to the nation, each in his own way and with his own programme, calling upon the nation to meet at once the critical emergency created by disunion among non-Communist nations. Each denounced the U.S.S.R. On Dec. 29, in a broadcast, John Foster Dulles attempted to reconcile the opposing views as to means of preserving peace by emphasizing the weaknesses of the Soviet Union and the potential strength of the United States to win any war which it could not avoid.

In July Truman asked for additional funds for navy and army expenditure; the marines were at once to call in their reserves; and it was announced that certain national guard units would be alerted for a call to service. The National Selective Service board at once set about calling 100,000 men. New plans were announced for an expenditure of $4,000 million for the development of air power. On Sept. 12 George C. Marshall succeeded Johnson as secretary of defence.

Autumn successes of the U.S. forces in the campaigns in North Korea led to widespread expression of belief on three points: (a) the war could be and ought to be localized; (b) Communists in China would not wish armed conflict with the U.S.; and (c) the Soviet Union would withdraw or had withdrawn whatever support it had given to the North Koreans, because of a wish to avoid World War III. On Oct. 14 Truman and General MacArthur met in conference at Wake Island, and on his return the president delivered an optimistic address to the nation. But this point of view was short-lived. All expectations were proved to be wrong. The defeat and rout of the North Korean forces in mid-October was suddenly reversed by great bodies of Chinese Communist troops crossing the Manchurian border into Korea and forcing the U.S. forces into a costly retreat. The debate in the U.S. now turned to a discussion of the possibility of the U.N. holding in Korea, the nature of any aggressive action against Communist China and, most of all, the final shifting of the centre of preparation for armed conflict to western Europe.

National Emergency. The last two months of the year were packed with dramatic events. On Nov. 1 two Puerto Rican revolutionaries made an attempt at Blair House in Washington to assassinate President Truman. The shock intensified popular apprehension of a widespread revolutionary mood at home and abroad. Early in November the general assembly of the U.N. accepted the proposals of Acheson, on behalf of the U.S., that vital matters of world peace would be discussed and acted upon in the assembly, where all the member nations were represented, and not in the Security council

subject to veto. Thus events had forced revision. Before this the Security council had asked that Communist China should send a representative to explain China's action in Korea, and on Nov. 11 the Communist government of China announced their acceptance, and in the council their answer was given on Dec. 1. It demanded that the U.S., the supposed villain in the world tragedy, should get out of Korea. A committee of the U.N. appealed to Communist China to "cease fire" in Korea. In the midst of this, Clement Attlee, the British prime minister, journeyed to Washington for a conference with Truman. It was not clear how satisfactory an agreement was reached except for statements that the U.S. and Great Britain would continue to stand together.

On Dec. 16 Truman declared a national emergency and, addressing the nation in explanation of the need, outlined the steps the administration proposed to take to put the nation on a war footing. As the year closed it was generally accepted by the people of the U.S. that all-out war with Communist China was to be avoided by any means short of appeasement in matters affecting the far east. As for the U.S. position in Korea, there was still uncertainty at year's end, either as to U.S. military policy in the field or as to the position of the U.S. in the U.N. The complete shift in national interest was seen in late December in the wide attention given the decision of the North Atlantic treaty powers to create an effective security force for the North Atlantic community, and for this purpose General Dwight D. Eisenhower, who had been appointed supreme commander of the forces in Europe of the North Atlantic treaty powers, left for Europe at the end of December. There was a growing conviction that Communism must be contained, if not actually defeated, in Europe and in Asia if the United States was to survive. (*See* also ELECTIONS; KOREAN WAR; POLITICAL PARTIES, U.S.)

(E. E. R.)

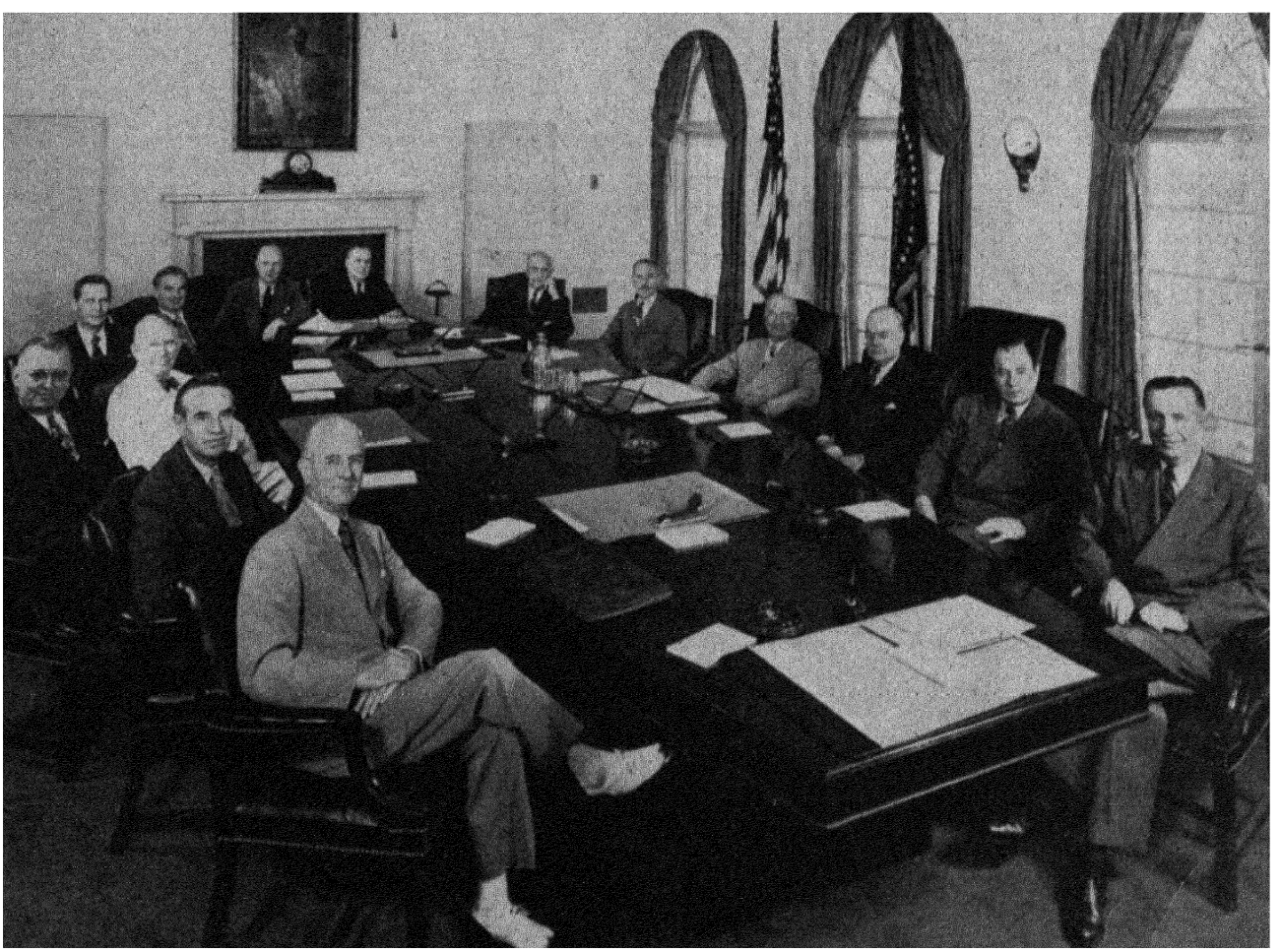
Education. Each of the 48 states of the union has a system of free, secular and public education comprising elementary schools, junior high schools and high schools, with courses covering 12 years. Attendance is compulsory, generally up to the age of 16. There are also private (mainly Roman Catholic) elementary and secondary schools. Data in Tables I and II are taken from the *Statistical Abstract of the United States 1949* and relate to the continental U.S.

TABLE I. ELEMENTARY AND SECONDARY SCHOOLS

		1939-40	1945-46	1950-51
Pupils in schools				
Elementary	Public	18,832,098	17,677,744	23,686,000*
	Private	2,163,371	2,259,392	
Secondary	Public	6,601,444	5,622,197	6,142,000*
	Private	457,768	565,108	

* U.S. Office of Education estimates.

In 1946 there were 160,227 public elementary and 24,314 public secondary schools and 13,296 private elementary and secondary schools. (In 1949 there were 7,777 Roman Catholic elementary and 1,596 secondary schools). The total number of teachers in public schools decreased in the years 1940-46 from 875,477 to 831,026 (the latter figure including 541,528 teachers in elementary and 289,498 secondary schools). In 1946 there were 64,495 teachers in private elementary and 36,370 teachers in private secondary schools. There was a general shortage of teachers estimated in 1950 by the U.S. Office of Education at 90,000. Vocational schools had a total enrolment of 2,508,618 in 1947 and a teaching staff of 48,311.



The United States cabinet, Aug. 1950. Clockwise around table: Charles Sawyer, secretary of commerce; W. Averell Harriman, foreign affairs adviser; John Steelman, labour adviser; Alben Barkley, vice president; Maurice J. Tobin, secretary of labour; Stuart Symington, chairman of National Security Resources board; Charles F. Brannan, secretary of agriculture; Jesse M. Donaldson, postmaster general; Louis A. Johnson, secretary of defence; Dean G. Acheson, secretary of state; President Harry S. Truman; John W. Snyder, secretary of the treasury; J. Howard McGrath, attorney general; and Oscar L. Chapman, secretary of the interior.

TABLE II. INSTITUTIONS OF HIGHER EDUCATION

	1939-40	1945-46	1950-51
Total resident students	1,494,203	1,676,851	2,295,000*
Teaching staff	131,552	136,032	—

* U.S. Office of Education estimate, including 575,000 veterans (ex-servicemen) receiving a subsistence allowance of $75 a month from the U.S. Veterans' administration.

The above figures cover 1,609 institutions (public and private) in 1939, 1,768 in 1945 and 1,836 in 1950. Of 164 universities the oldest are Harvard (Cambridge, Massachusetts, 1636), Yale (New Haven, Connecticut, 1701) and Pennsylvania (Philadelphia, 1740). The largest are the universities of New York (47,936 students in 1949-50), of California (Berkeley and Los Angeles, 43,426), of Minnesota (Minneapolis, 34,091) of Boston, Massachusetts (31,638), of Columbia (New York, 29,153) and of Illinois (Urbana, 28,592). Six other universities had over 20,000 students each in 1950.

Education in the U.S. is financed by the member-states or privately and only to a small extent by the federal government. In 1945-46, for example, the total expenditure on education amounted to $4,140·1 million, including $2,906·9 million on public elementary and secondary schools, $341·5 million on private elementary and secondary schools, $425·5 million on public institutions of higher education and $466·2 million on private institutions of higher education. Illiteracy dropped to 2·7% in 1949 compared with 4·3% in 1930. (*See* also EDUCATION.)

Agriculture. Data in Tables III, IV and V are taken from *Food and Agricultural Statistics, F.A.O. Monthly Bulletin.*

TABLE III. AGRICULTURAL PRODUCTION ('000 metric tons)

	1934-38	1947	1948	1949	1950
Wheat	19,476	37,209	35,749	31,202	27,490
Barley	4,495	6,122	6,878	5,184	6,531
Rye	1,028	660	672	475	572
Oats	13,973	17,410	21,675	19,202	21,540
Rice	956	1,597	1,736	1,820	1,725
Maize (Corn)	53,066	60,555	93,521	85,799	78,881
Potatoes	10,024	10,588	12,374	10,940	11,719
Cotton, ginned	2,755	2,571	3,225	3,476	—
Tobacco	590	957	899	894	—

Crop production in 1950 was perhaps the third largest on record and exceeded the average for the most productive periods in U.S. agriculture. With 6·8% of the world's population the U.S. produced more than half of the world's total production of maize and cotton in 1950, over two-fifths of oats, over a quarter of tobacco and over one-sixth of wheat.

TABLE IV. LIVESTOCK ('000 head, January).

	1939	1945	1948	1950
Cattle	66,029	85,573	78,126	80,277
Pigs	50,012	59,331	55,028	60,424
Sheep	51,595	39,609	34,827	30,797
Horses	10,629	8,715	6,589	5,310
Mules	4,163	3,010	2,541	2,153
Poultry (hens)	418,591	433,111	461,550	481,190

TABLE V. MAIN FOODSTUFFS PRODUCTION ('000 metric tons).

	1937	1947	1948	1949	1950‖
Meat (total)	7,340*	10,628	9,727	9,848	9,915
Milk (total)	46,223	54,007	52,403	54,040	—
Factory butter	736·8	602·4	548·4	638·4	720
Factory cheese†	294·0	536·4	496·8	541·2	—
Sugar, raw value‡	1,673§	2,006	1,675	1,891	—

* 1935-39 av. † Excluding cottage and full-skim cheddar cheese. ‡ Including beet sugar, of which the U.S. produced an average of 1,377,000 tons in 1937-38, 1,243,000 tons in 1948 and 1,474,000 in 1949. § 1937-38 av. ‖ Est.

The average yearly egg production in 1943-46 was 54,623 million; in 1948 it reached 55,168 million, that is, 367 eggs per inhabitant.

Fisheries (1947, including Alaska): total catch, 4,378 million lb. valued at $303 million (1939: 4,443 million lb. valued at $96·5 million). (*See* also AGRICULTURE.)

Industry. The number of civilians employed in Dec. 1950 was 60,308,000 compared with 58,556,000 in Dec. 1949. The gain in non-agricultural employment was about 1·8 million, but farm jobs (6·2 million in Dec. 1950) declined by 539,000. The index number of employment in manufacturing (1937=100), which in Nov. 1949 stood at 130, was 152 in Nov. 1950. The number of unemployed decreased during the year from 3,489,000 to 2,229,000. In 1947 there were 240,881 manufacturing establishments employing 14,294,304 persons. Data in Tables VI, VII and VIII are taken from the United Nations *Statistical Yearbook 1948* and *Monthly Bulletin of Statistics.*

TABLE VI. PRODUCTION OF FUEL AND POWER

	1940	1948	1949	1950*
Coal ('000 metric tons)	464,711	595,410	435,966	499,000
Gas (million cu.m.) natural	75,322	138,000	—	—
Gas (million cu.m.) m'factured†	12,048	16,716	15,948	15,100
Electricity‡ (million kwh.)	141,837	282,696	291,099	329,028
Crude Petroleum ('000 m.tons)	182,867	276,732	252,096	271,000

* Estimates based on 10 months. † Gas sold by public utilities, including mixed gas. ‡ Public utilities only.

In 1948 the U.S. produced two-fifths of the world extraction of coal and almost three-fifths of crude petroleum.

TABLE VII. PRODUCTION OF METALS ('000 metric tons)

	1940	1947	1948	1949	1950*
Pig iron	43,027	54,559	55,200	49,176	59,500
Steel	60,765	77,015	80,412	70,740	87,800
Copper†	830·4	790·8	771·6	700·8	850
Zinc†	613·2	728·4	715·2	739·2	748
Lead‡	531·6	490·8	464·4	492·0	527
Aluminium†	187·1	518·7	565·5	547·4	550

* Estimates based on 10 months. † Primary (virgin) metal only. ‡ Some secondary metal included.

The U.S. share in world production of metals in 1950 was approximately as follows: pig iron 50%, steel 53%, copper 38%, zinc 41%, lead 30% and aluminium 43%.

TABLE VIII. MANUFACTURING INDUSTRIES.

	1940	1948	1949	1950*
Cement ('000 metric tons)	22,575	34,620	35,424	37,500
Building bricks (million units)	4,079	5,844	5,520	6,300
Rubber ('000 m.t.) synthetic (production)	3·6	495·6	399·6	499·0
Rubber ('000 m.t.) natural (consumpt'n)	582·6	617·4	567·5	710·0
Woven cotton fabrics (million m.)	7,578†	8,820	7,692	8,814
Wool yarn ('000 metric tons)	269·6†	361·2	312·0	360·0
Rayon ('000 m.t.) filament yarn	176·9	388·8	362·4	426·0
Rayon ('000 m.t.) staple fibre	36·8	121·2	87·6	136·4
Motor vehicles ('000 units) cars	3,717·4	3,909·2	5,119·4	6,940
Motor vehicles ('000 units) commercial	754·9	1,376·2	1,134·1	1,336

* Estimates based on 10 months. † 1939.

The production index in manufacturing industries, having reached 181 in Oct. 1948 (1937=100), declined to 150 in June 1949 but was 204 in Oct. 1950.

Foreign Trade. The geographic area covered by data in Table IX is the U.S. customs area, which includes Alaska, Hawaii and Puerto Rico (Virgin Islands only from 1935 to 1939).

TABLE IX. FOREIGN TRADE (million dollars)

	1936-40*	1941-45*	1948†	1949†	1950†
Exports (incl. re-exports)	3,219·6	10,051·2	12,769	12,151	10,173
Imports	2,482·0	3,507·5	7,128	6,624	7,301
Excess of exports	737·6	6,543·7	5,641	5,527	2,872

* From *Statistical Abstract of the U.S. 1948.* † U.N. *Monthly Bulletin of Statistics.*

In the mid-19th century the U.S. was largely an exporter of raw materials such as cotton and tobacco and an importer of manufactured goods from Europe. In the years 1936-40 finished manufactures represented over 52% of its exports and raw materials 33% of imports. Main destinations of exports (1949): Europe (E.R.P. countries) 34·0% (including U.K. 5·8%); Latin America 22·4%, Asia 18·6%, Canada 16·0%. Main sources of imports: Latin America 35%, Canada 22·2%, Asia 19·2%, Europe (E.R.P. countries) 12·6% (incl. U.K. 3·4%). Index numbers of quantum of the external trade (1937=100), showing the changes after allowing for variations in prices which might have occurred since the base year, stood in 1949 at 105 for imports and at 204 for exports; in Oct. 1950 the index numbers were 149 and 182 respectively. Index numbers of unit value, reflecting changes in the average prices of commodities imported and exported (1937=100), stood in 1949 at 208 for imports and 177 for exports; in Oct. 1950 the index numbers were 245 and 179. (*See* also INTERNATIONAL TRADE.)

Transport and Communications. Railways (1947): number of operating companies 502; total first track 225,806 mi. Rolling stock (1947): locomotives 44,344; goods waggons 1,759,758; passenger coaches 39,057. Rail transport (monthly averages 1949; in brackets Aug. 1950): passenger-km. 4,707 (5,029) million; goods net ton-km. 64,049 (82,491) million; goods carried 174·8 (229·5) million metric tons. Roads (1945): 3,012,271 mi., including 1,494,851 mi. surfaced. Motor vehicles registered (1947, in brackets 1937): cars 30,719,000 (25,391,000), commercial 6,642,000 (4,315,000).

Air transport (monthly averages, 1949; in brackets Oct. 1950): over 250 companies carried 1,182·0 (1,519·7) million passenger-km. and 32·4 (50·9) million ton-km. of goods. (*See* also AVIATION, CIVIL.)

Shipping: between June 30, 1939, and Sept. 30, 1946, the U.S. sea-going merchant marine increased from 1,091 vessels of 1,000 gross tons and over to 2,332 and from 9,303,000 to 25,400,000 dead weight tons. By Sept. 30, 1949, the number of vessels dropped to 1,214, totalling 14,350,000 d.w.t.; at that date 1,974 government-owned vessels were kept in reserve. From the end of World War II until March 1, 1948, 1,117 vessels were sold to foreign countries. Out of a total of 84,583,000 gross tons of the world's sea-going shipping in Dec. 1950, the U.S. share, including the reserve fleet, was 22,118,000 gross tons. Before World War II the U.S. merchant marine was the second largest after that of the U.K. and before that of Japan; after World War II it became the world's largest, closely followed by that of the U.K., with Norway third and Panama fourth. (*See* also SHIPPING, MERCHANT MARINE.)

Number of telephones: Jan. 1, 1950, 40,709,398, or 58% of the world's total; (1937) 19,450,000. Broadcasting: transmitting stations (1950) 2,997 (1937) 734; approximately 90 million wireless receiving-sets (including 14 million installed in cars) were in use at the end of 1950, as compared with 50 million (including 8 million installed in cars) in Dec. 1940. Television transmitting stations (Dec. 1950): 107.

Finance and Banking. Table X gives the U.S. postwar budget figures with the last prewar budget as a measure of comparison. The fiscal year ends on June 30. (*See* BUDGET NATIONAL.)

TABLE X. U.S. FEDERAL REVENUE AND EXPENDITURE ($ million)

	1939-40*	1948-49*	1949-50*	1950-51†	1951-52†
Revenue	5,387·1	38,246	37,045	44,512	55,138
Expenditure	9,127·4	40,057	40,156	47,210	71,594
Deficit	3,740·3	1,811	3,111	2,698	16,456

* Actual. † Estimates.

(In this paragraph all figures are $ million.) Total gross direct debt: (Dec. 1950) 256,708, (Dec. 1939) 41,961. Currency circulation: (Dec. 1950) 27,916, (Dec. 1939) 7,598. Gold stock: (Dec. 1950) 22,795, (Dec. 1949) 24,427, (Dec. 1939) 17,644. Deposit money: (Oct. 1950) 89,400, (Dec. 1939) 29,800. National income at factor cost in current prices: (1949) 216,800; (1939) 72,500. Consumers' expenditure on goods and services: (1949) 178,832, (1939) 67,466. Government foreign credits (Sept. 30, 1950): outstanding 9,972·8 (incl. U.K. 4,819·6; France 2,038·7; Netherlands 445·4; Italy 357·5; U.S.S.R. 222·5); unutilized commitments and authorizations 1,667·9 (incl. Export-Import bank 1,274·8); total 11,640·7.

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(K. SM.)

UNITED STATES TERRITORIES AND POSSESSIONS: *see* ALASKA; HAWAII; PACIFIC ISLANDS, U.S.; PUERTO RICO; VIRGIN ISLANDS.

UNIVERSITIES AND COLLEGES.

International Developments. In April the International Universities bureau (the permanent secretariat of the International Universities organization founded at Utrecht in Aug. 1948) which began to function in Oct. 1949 announced that it was able to "supply any information concerning the university world." The second annual congress of the International Union of Students held at Prague in August and attended by over 850 delegates from 70 countries was conducted as a political demonstration along approved Communist lines. The Yugoslav union was expelled from membership, 25 colonial unions were accepted *en bloc* without discussion, delegates from the U.S. and western European unions were subjected to abuse and hostility, and practically all the congress time was occupied with political diatribes and perfervid canvassing in support of the Stockholm "peace" campaign. The I.U.S. general secretary claimed that the congress represented 5 million students. In October the English delegation recommended disaffiliation to its council.

Among the numerous and rapidly increasing number of fellowships, scholarships and other awards made for study and research on an international basis, it was announced in October that 121 scholarships for theological students had been awarded by the World Council of Churches for the academic year 1950-51. Of these, 15 were offered by German churches at German universities and theological seminaries, the first such awards since the war. In August the constituent assembly of the Council of Europe granted formal patronage to the College of Europe at Bruges, Belgium, and the European Cultural centre at Geneva. The college began its first academic year in October with 17 graduate students from European countries including Germany and Austria.

Great Britain. In February the British parliament assembled without university representatives for the first time since 1603 when James I gave Oxford and Cambridge the right to elect two representatives each. University representation was abolished by the Representation of the People act, 1948; 12 seats were involved.

In March the lord mayor of London launched a National Thanksgiving fund aiming to raise £2 million to build two halls of residence for U.S. and Commonwealth students in London and to enlarge one for overseas students in Scotland in gratitude for gifts of food during the war. In March F. W. D. Deakin, fellow of Wadham college, Oxford, was appointed warden of St. Antony's, the new college for which funds were donated in 1949 by the French shipowner, Antonin Besse. The college opened in October with 7 students: 2 French, 2 American and 3 English. Its programme emphasized European history and economics.

In October the University College of North Staffordshire opened with Lord Lindsay of Birker as principal and 156 students. The college was unique in Britain in having the right to award its own degrees, and in having a four-year course. During the first year all students followed a course of lectures on "The History of European Civilisation," "Modern Democratic Institutions," and "Experimental Science." They had to pass an internal examination upon this course to be allowed to proceed further. Thereafter students were to study two or three principal subjects for three years and to take in addition one-year courses in three subsidiary subjects. The range of courses studied had to cover the humanities, social studies and experimental science. A general honours degree was to be awarded. The college was wholly residential, co-educational and undenominational.

In May Birmingham university celebrated its half-century and Southampton university college its centenary. In July Nottingham university, founded in 1948, awarded its first degrees. Emeritus Professor James Drever, who held the first chair of psychology in Scotland at Edinburgh university from 1931 to 1945, died in August; and Sir Ernest Graham-Little, member of parliament for London university from 1924 to 1950 and an unwavering champion of the London external degree, died in October (*see* OBITUARIES).

Commonwealth. *Australia.* Adelaide university having had its annual grant from the government substantially increased to enable it to expand, early in the year advertised 28 additional teaching posts. In February the foundation stone was laid of the New South Wales University of

Cont. on p. 661



Lord Baghley (in morning dress) after his installation in ***April 1950*** *as rector of St. Andrew's university. On his left is Sir James Irvine, principal and vice-chancellor.*

Universities and University Colleges of the British Isles, Academic Year 1950-51

University or University College	*Founded*	*Principal Officers (with Academic Title*)*	*Full-time Students Men*	*Women*
BIRMINGHAM, UNIV. OF	1900	R. A. Eden, *Ch.*	2,608	714
		Sir Raymond Priestley, *V.Ch. & Pr.*		
BRISTOL, UNIV. OF	1909	Winston Churchill, *Ch.*	1,753	729
		Sir Philip Morris, *V.Ch.*		
CAMBRIDGE, UNIV. OF	12th c.	Lord Tedder, *Ch.*	7,158	707
		S. C. Roberts, *V.Ch.*		
Christ's coll.	1506	Prof. B. W. Downs, *M.*	426	
Clare coll.	1326	Sir Henry Thirkill, *M.*	396	
Corpus Christi coll.	1352	Sir Will Spens, *M.*	234	
Dowr ing coll.	1800	Sir Lionel Whitby, *M.*	354	
Emmanuel coll.	1584	T. S. Hele, *M.*	440	
Fitzwilliam house	1869	W. S. Thatcher, *C.*	370	
Girton coll.	1869	Mary Cartwright, *Mi.*		332
Gonville & Caius coll.	1348	Sir James Chadwick, *M.*	396	
Jesus coll.	1496	E. M. W. Tillyard, *M.*	320	
King's coll.	1441	Sir John Sheppard, *Pv.*	362	
Magdalene coll.	1542	H. U. Willink, *M.*	256	
Newnham coll.	1871	Dame Myra Curtis, *Pr.*		309
Pembroke coll.	1347	S. C. Roberts, *M.*	359	
Peterhouse	1284	P. C. Vellacott, *M.*	212	
Queens' coll.	1448	J. A. Venn, *P.*	423	
St. Catharine's coll.	1473	D. Portway, *M.*	410	
St. John's coll.	1511	E. A. Benians, *M.*	645	
Selwyn coll.	1882	Rev. W. Telfer, *M.*	283	
Sidney Sussex coll.	1596	T. Knox-Shaw, *M.*	200	
Trinity coll.	1546	G. M. Trevelyan, *M.*	700	
Trinity hall	1350	H. R. Dean, *M.*	290	
DURHAM, UNIV. OF	1832	G. M. Trevely .n, *Ch.*	3,519	820
		Sir James Duff, *V.Ch.*		
Durham colleges	—	Sir James Duff, *W.*	894	252
Bede coll.	1841	Canon G. E. Brigstocke, *Pr.*	218	
Hatfield coll.	1846	E. Birley, *M.*	171	
Neville's Cross coll.	1921	Netty Lunan, *Pr.*		31
St. Aidan's soc.	1947	Ethleen Scott, *Pr.*		96
St. Chad's coll.	1904	Rev. T. S. Wetherall, *Pr.*	61	
St. Cuthbert's soc.	1947	Clifford Leech, *Pr.*	244	
St. Hild's coll.	1858	Angel Lawrence, *Pr.*		133
St. John's coll.	1909	Rev. R. R. Williams, *Pr.*	104	
St. Mary's coll.	1899	Margaret Fergusson, *Pr.*		89
University coll.	1833	A. Macfarlane-Grieve, *M.*	213	
King's coll., Newcastle	1937	Lord Eustace Percy, *R.*	2,623	567
LEEDS, UNIVERSITY OF	1904	(vacant), *Ch.*	2,525	694
		C. R. Morris, *V.Ch.*		
LIVERPOOL, UNIV. OF	1903	(vacant), *Ch.*	2,532	675
		J. F. Mountford, *V.Ch.*		
LONDON, UNIV. OF	1836	Earl of Athlone, *Ch.*	13,000‡	4,850‡
		Prof. Lillian Penson, *V.Ch.*		
		D. W. Logan, *Pr.*		
Incorporated colleges:				
University coll.	1826	D. R. Pye, *Pv.*	2,034	575
King's coll.§	1829	Sir Wm. Halliday, *Pr.*	1,309	349
Senate institutions:				
Brown Animal Sanatory instn.	1871	(destroyed in World War II and not yet re-opened)		
Courtauld Inst. of Art	1932	Prof. A. F. Blunt, *Di.*	34	22
Inst. of Advanced Legal Studies	1948	Prof. Sir D. Hughes Parry, *Di.*	78	11
Inst. of Archaeology	1934	Prof. V. G. Childe, *Di.*	4	2
Inst. of Commonwealth Studies	1949	Prof. W. K. Hancock, *Di.*	(50)‖	(7)‖
Inst. of Education	1902	G. B. Jeffery, *Di.*	399	360
Inst. of Germanic Langs. & Lits.	1950	Prof. L. A. Willoughby, *Di.*	To open Jan. 1951	
Inst. of Historical Research	1920	Prof. J. G. Edwards, *Di.*	(80)‖	(36)‖
Sch. of Slav. & E. Europ. Studies	1932	G. N. Bolsover, *Di.*	64	28
Warburg institute	1944	Prof. H. Frankfort, *Di.*	4	2
Schools of the University:				
Bedford coll.	1849	Geraldine Jebb, *Pr.*	22**	758
Birkbeck coll.¶	1823	(vacant), *M.*	1,053¶	584¶
Imperial Coll. of Sci. & Technol.	1907	Sir Roderic Hill, *R.*	1,526	46
King's Coll. Theological Department§	1829	Canon E. S. Abbott, *D.*	173	42
King's Coll. of Household & Social Sci.	1908	Margaret Sargeaunt, *Pr.*	4**	253
London Coll. of Divinity	1863	Rev. F. D. Coggan, *Pr.*	49	
London Sch. of Econ. & Politic. Sci.	1895	Sir A. Carr-Saunders, *Di.*	1,235	399
New coll.	1673	Rev. Sydney Cave, *Pr.*	33	1

University or University College	*Founded*	*Principal Officers (with Academic Title*)*	*Full-time Students Men*	*Women*
LONDON, UNIVERSITY OF (*continued*)				
Queen Mary coll.	1882	B. Ifor Evans, *Pr.*	703	243
Richmond coll.	1843	Rev. Prof. E. S. Waterhouse, *Pr.*	68	
Royal Holloway coll.	1886	Edith Batho, *Pr.*	13**	329
St. John's hall, *alternative name for* London Coll. of Divinity, *v. supra.*				
Sch. of Oriental & African Studies	1916	Prof. Sir Ralph Turner, *Di.*	187†	36†
Westfield coll.	1882	Mrs. J. L. Stocks, *Pr.*	6**	243
Wye coll.	1894	D. Skilbeck, *Pr.*	126	71
British Postgrad. Med. Federation	1945	Prof. Sir Francis Fraser, *Di.*	1,443††	
Inst. of Child Health	1945	G. H. Newns, *D.*	[60]‖	
Inst. of Laryngology & Otology	1945	C. Gill-Carey, *D.*	44	2
Inst. of Obstetrics & Gynaecology	1948	C. D. Read, *Di. and D.*	21	12
Inst. of Ophthalmology	1946	R. C. Davenport, *D.*	56	3
Inst. of Psychiatry	1924	D. L. Davies, *D.*	159†	
Postgrad. Med. Sch. of London	1931	C. E. Newman, *D.*	[200]‖	
Charing Cross Hosp. Med. Sch.	1834	E. C. Warner, *D.*	173	37
Guy's Hosp. Med. Sch.	1769	E. R. Boland, *D.*	949	73
King's Coll. Hosp. Med. Sch.	1830	V. F. Hall, *D.*	225	53
Lister Inst. of Preventive Med.	1891	Sir Alan Drury, *Di.*	5	4
London Hosp. Med. coll.	1741	A. E. Clark Kennedy, *D.*	552	47
London Sch. of Hygiene & Trop. Med.	1924	A. Topping, *D.*	143	16
Middlesex Hosp. Med. Sch.	1835	Sir Harold Boldero, *D.*	431	51
Royal Cancer Hosp.	1851	(vacant), *D.*		14
Royal Dental Hosp. Sch. of Dent. Surg.	1858	H. L. Hardwick, *D.*	202	25
Royal Free Hosp. Sch. of Med.	1874	Katharine Lloyd-Williams, *D.*	27	446
Royal Veterinary coll.	1791	Prof. J. B. Buxton, *Pr. & D.*	358	28
St. Bartholomew's Hosp. Med. coll.	1662	C. F. Harris, *D.*	659	113
St. George's Hosp. Med. sch.	1756	M. F. Nicholls, *D.*	132	16
St. Mary's Hosp. Med. sch.	1854	D. Brinton, *D.*	404	56
St. Thomas's Hosp. Med. sch.	1553	Prof. W. G. Barnard, *D.*	460	45
Sch. of Pharmacy	1842	Prof. H. Berry, *D.*	64	25
Univ. Coll. Hosp. Med. sch.	1828	J. C. Hawksley, *D.*	294	61
Westminster Med. sch.	1834	H. E. Harding, *D.*	180	20
Goldsmiths' coll.†‡	1891	A. J. Price, *W.*	323†‡	434†‡
MANCHESTER, VICTORIA UNIV. OF	1880	Lord Woolton, *Ch.*	3,231	1,096
		Sir John Stopford, *V.Ch.*		
Municipal Coll. of Technology §§	1824	Sir James Myers, *Pr.*	757	11
NOTTINGHAM, UNIV. OF	1948	Lord Trent, *Ch.*	1,512	570
		B. L. Hallward, *V.Ch.*		
OXFORD, UNIV. OF	12th c.	Earl of Halifax, *Ch.*	6,119	1,075
		V. Rev. John Lowe, *V.Ch.*		
All Souls coll.	1438	B. H. Sumner, *W.*	*c.* 50 fellows	
Balliol coll.	1263-68	Sir David Keir, *M.*	325	
Brasenose coll.	1509	H. M. Last, *Pr.*	330	
Campion hall	1896	Rev. T. Corbishley, *M.*	31	
Christ Church	1546	V. Rev. John Lowe, *D.*	314	
Corpus Christi coll.	1517	W. F. R. Hardie, *P.*	143	
Exeter coll.	1314	E. A. Barber, *R.*	288	
Hertford coll.	1874	N. R. Murphy, *Pr.*	180	
Jesus coll.	1571	J. T. Christie, *Pr.*	240	
Keble coll.	1870	Rev. H. J. Carpenter, *W.*	305	
Lady Margaret hall	1878	Lucy Sutherland, *Pr.*		223
Lincoln coll.	1427	K. A. H. Murray, *R.*	310	
Magdalen coll.	1458	T. S. R. Boase, *P.*	322	
Merton coll.	1264	G. R. G. Mure, *W.*	212	
New coll.	1379	A. H. Smith, *W.*	362	
Nuffield coll.	1937	A. L. Loveday, *W.*	20	
Oriel coll.	1326	G. N. Clark, *Pv.*	204	
Pembroke coll.	1624	Rev. F. H. Dudden, *M.*	181	
The Queen's coll.	1340	J. W. Jones, *Pv.*	273	

Universities and University Colleges of the British Isles, Academic Year 1950-51 (continued)

University or University college	*Founded*	*Principal Officers (with Academic Title*)*	*Full-time Students Men*	*Women*
OXFORD UNIVERSITY OF (*continued*)				
St. Anne's soc.	1879	Hon. Eleanor Plumer, *Pr.*		279
St. Antony's coll.	1950	F. W. Deakin, *W.*	7	
St. Benet's hall	1897	Rev. F. G. Sitwell, *M.*	14	
St. Catharine's soc.	1868	Rev. V. J. K. Brook, *C.*	374	
St. Edmund hall	pre-1238	A. B. Emden, *Pr.*	234	
St. Hilda's coll.	1893	Julia Mann, *Pr.*		179
St. Hugh's coll.	1886	Evelyn Proctor, *Pr.*		180
St. John's coll.	1555	A. L. Poole, *P.*	230	
St. Peter's hall	1928	Canon R. W. Howard, *M.*	165	
Somerville coll.	1879	Janet Vaughan, *Pr.*		217
Trinity coll.	1554-55	J. R. H. Weaver, *P.*	235	
University coll.	1249	Rev. J. H. S. Wild, *M.*	*c.* 280	
Wadham coll.	1612	Sir Maurice Bowra, *W.*	305	
Worcester coll.	1714	J. C. Masterman, *Pv.*	235	
READING, UNIV. OF	1926	Viscount Templewood, *Ch.* J. F. Wolfenden, *V.Ch.*	582	485
SHEFFIELD, UNIV. OF	1905	Earl of Halifax, *Ch.* Sir Irvine Masson, *V.Ch.*	1,630	360
WALES, UNIV. OF	1893	Duke of Edinburgh, *Ch.* Ifor L. Evans, *V.Ch.*	4,039†	1,245†
Aberystwyth, Univ. Coll. of Wales	1872	Ifor L. Evans, *Pr.*	894	339
Bangor, Univ. Coll. of N. Wales	1885	D. E. Evans, *Pr.*	697	244
Cardiff, Univ. Coll. of S. Wales and Monmouth	1883	A. Steel, *Pr.*	1,170	444
Cardiff, Welsh Nat. Sch. of Med.	1931	R. M. F. Picken, *Pv.*	134	49
Swansea, Univ. Coll.	1920	J. S. Fulton, *Pr.*	859	199
EXETER, UNIV. COLL. OF S.W. ENGLAND ‖‖	1901	J. Murray, *Pr.*	577	370
HULL, UNIV. COLL. OF ‖‖	1928	J. H. Nicholson, *Pr.*	571	324
LAMPETER, ST. DAVID'S COLL. ¶¶	1822	Canon H. K. Archdall, *Pr.*	170	
LEICESTER, UNIV. COLL. ‖‖	1918	F. I. Attenborough, *Pr.*	475	254
SOUTHAMPTON, HARTLEY UNIV. COLL. ‖‖	1850	Sir Robert Wood, *Pr.*	675	275
STOKE-ON-TRENT, UNIV. COLL. OF N. STAFFS.***	1949	Lord Lindsay of Birker, *Pr.*	99	57
ABERDEEN, UNIV. OF	1494	Thomas Johnston, *Ch.* T. M. Taylor, *V.Ch. & Pr.* Lord Tweedsmuir, *R.*	1,487	540
EDINBURGH, UNIV. OF	1583	Marquess of Linlithgow, *Ch.* Sir Edward Appleton, *V.Ch. & Pr.* Alastair Sim, *R.*	3,779	1,431
New coll.†††	1845	V. Rev. J. Baillie, *Pr.*	177	8
GLASGOW, UNIV. OF	1451	Lord Boyd-Orr, *Ch.* Sir Hector Hetherington, *V.Ch. & Pr.* J. MacCormick, *R.*	4,087	1,225
Royal Tech. coll ‡‡‡	1796	D. S. Anderson, *Di.*	1,172	95
ST. ANDREWS, UNIV. OF	1411	Duke of Hamilton, *Ch.* Sir James Irvine, *V.Ch. & Pr.* Lord Burghley, *R.*	1,375	687
St. Mary's coll.	1537	V. Rev. G. S. Duncan, *Pr.*	38	2
United coll.	1747	Sir James Irvine, *Pr.*	720	503
Univ. coll., Dundee	1881	D. N. Wimberley, *Pr.*	440	132
Advanced Med. and Dent. Schs., Dundee	1881	Prof. W. J. Tulloch, *D.*	177	50
BELFAST, THE QUEEN'S UNIV. OF	1908	Viscount Alanbrooke, *Ch.* E. Ashby, *P. & V.Ch.*	1,807	554
DUBLIN, UNIV. OF, TRINITY COLL.	1592	Earl of Iveagh, *Ch.* Earl of Rosse, *V.Ch.* E. H. Alton, *Pv.*	1,810	712
NATIONAL UNIV. OF IRELAND	1909	Eamon de Valéra, *Ch.* Michael Tierney, *V.Ch.*	3,886§§§	1,375§§§
Cork, Univ. coll.	1845	A. O'Rahilly, *P.*	680	272
Dublin, Univ. coll.	1909	Michael Tierney, *P.*	2,402†	798†
Galway, Univ. coll.	1849	Rt. Rev. P. de Brún, *P.*	586	285

Notes. * *C.* Censor; *Ch.* Chancellor; *D.* Dean; *Di.* Director; *M.* Master; *Mi.* Mistress; *P.* President; *Pr.* Principal; *Pv.* Provost; *R.* Rector; *V. Ch.* Vice Chancellor; *W.* Warden. † Session 1949 50 figures. ‡ Session 1950 51, provisional; there were also 2,656 men and 221 women students (1949 50) at non-univ. institutions having recognized teachers (music colls., 3; med. and sci. research instns., 5; polytechnics and tech. colls., 7; teachers training colls., 2; others, 2) and 31,042 home and overseas external students (1949 50). § King's coll. and King's Coll. Theol. Dept. are independent instns. united for some purposes. ‖ Figures in (round brackets), number of part-time research students, students attending seminars or students also registered at other univs. or colls.; figures in [square brackets], average full-time attendance on short courses, etc. ¶ Coll. for evening students; totals include 43 m. and 13 w. full-time post-graduates. ** Men postgraduates working under specialist advisers at women's colls. †† Includes 410 students (1949 50) at associated insts. (Insts. of Cardiology; Dental Surg.; Dermatology; Diseases of the Chest; Orthopaedics; Urology). ‡‡ Administered by delegacy of London univ. senate, but only 37 m. and 66 w. of univ. status; remainder included 192 m. and 262 w. of training coll. status and 94 m. and 106 w. art students. §§ Independent coll. providing Manchester univ. technol. faculty. ‖‖ Prepares students for London univ. external degrees. ¶¶ Confers B.A. and B.D. *** Confers B.A. ††† Independent coll. providing Edinburgh univ. theological faculty. ‡‡‡ Independent coll. associated with Glasgow univ. in engineering, applied chemistry, pharmacy, architecture; also confers its own diplomas and prepares students for London degrees. §§§ Includes *c.* 220 m. and *c.* 20 w. at St. Patrick's coll., Maynooth (recognized coll.). *N.B.* Student figures for constituent colls. of federal univs. may not add to give univ. totals, as colls. may have students of non-univ. status and univ. totals may include students not at any constituent coll.; Cambridge univ. total of women students includes 66 at Hughes hall (recognized instn.)

Cont. from p. 659

Technology. The president announced grants of £20,000 from the Commonwealth government for research, £31,250 from the Nuffield foundation for a research professorship in mechanical engineering and £15,000 from mining companies at Broken Hill for senior staff in mining engineering.

Canada. Toronto university, like McGill two years previously, offered to reserve places for British students in various faculties, including agriculture and veterinary science.

India. In Dec. 1949 was published in Delhi volume I of the report of the University Education commission, Dec. 1948-Aug. 1949. This, the first comprehensive survey of the Indian universities since 1919, regretted the decline in teaching standards and administrative efficiency, and the high proportion of students failing to graduate. Among numerous conclusions the commission emphasized the necessity of raising standards of secondary education and attracting university teachers of good calibre. It recommended a three-year degree course to replace the two-year for a pass degree and suggested that universities might use either English or Hindi as the medium of instruction. In August the Inter-University board, considering the commission's report, favoured the use of a common medium of instruction but counselled caution in abandoning English. The board pressed for the establishment of a university grants committee on the British model. In July the government asked the universities to report what steps they had taken to popularize Hindi as a medium of instruction.

In February an agreement under the Fulbright act was signed providing for an annual expenditure on scholarships and fellowships not exceeding $400,000 in rupees. In July the High Court of Madras ruled that, in the selection of candidates for admission to universities and colleges, grounds of religion, race or caste could not be the basis.

New Zealand. The committee appointed to review the accrediting system for entry to the university, introduced in 1944, reported in September recommending that the system be continued and a further review made in five years' time. The report stated that the great majority of teachers in accrediting schools preferred it to the system of external examination.

Pakistan. In October, the prime minister, Liaquat Ali Khan, inaugurated the University of Peshawar, the fourth in the dominion.

British Colonies and Dependencies. On Jan. 1 the British Council (*q.v.*), at the request of the secretary of state for the colonies, took over responsibility for the housing and welfare of all colonial students in the United Kingdom. At May 31 these numbered 3,973, of whom 1,484 held scholarships financed by colonial development or colonial government funds. In February the Colonial Office announced that two new colleges of arts, science and technology were shortly to be established in the Gold Coast and Nigeria to supplement the university colleges. In February Princess Alice, Countess of Athlone, was installed as first chancellor of the University



The Countess of Athlone reading an address after being installed as first chancellor of the University College of the West Indies, Jamaica, Feb. 1950. On her left is the Earl of Athlone, chancellor of London university. Others seated in front row, left to right, are Hugh Springer, registrar, Sir Raymond Priestley, vice-chancellor of Birmingham university, and Sir James Irvine, principal and vice-chancellor of St. Andrew's university.

College of the West Indies. She was the first woman chancellor of any university. There were at the time 70 students in residence, in the faculties of medicine and science. Teaching in the arts faculty began in October.

In March Makerere college, Kampala, Uganda, was granted university college status. It had at the time 220 students drawn from Kenya, Uganda, Tanganyika and Zanzibar. In May Fourah Bay college, Sierra Leone, received a new council empowered to establish a university department. In June the Kenya Legislative Council recommended the establishment of a £100,000 fund to provide loans to assist students of all races to obtain higher education outside the colony, there being no universities or university colleges in Kenya.

United States. Many presidents of universities and colleges found themselves increasingly harassed by the dual problem of decreasing enrolments, because of the low birthrate of the depression years, and rising costs. At the same time the labour market was faced with the problem of absorbing 500,000 new graduates, the largest number ever to leave college in one year. In August the Selective Service department announced that it would defer drafting students who had been at least one year in college, had attained the upper half of the class during the past year and had signed on before Aug. 1 for a further period of college education.

In June the Supreme Court ruled that the University of Texas must admit Negroes, because equal facilities for them did not exist elsewhere in the state. In July the University of Missouri was ordered to do the same by the Missouri Circuit Court. Earlier in the year Berea college, Kentucky, re-admitted Negroes after excluding them for 46 years, the first college in the state to do so. For the academic year 1950-51 over 1,000 Negroes were enrolled in universities and colleges in the southern states. In October Dr. Ralph Bunche, formerly United Nations' mediator in Palestine and senior director of the U.N. trusteeship council, was appointed professor of government at Harvard university, the first Negro to hold professorial rank there. He succeeded Dr. Heinrich Brüning, former German chancellor.

In August, as the culmination of a dispute which began early in 1949, the regents of the University of California by a majority vote dismissed from their posts some 40 professors and lecturers who refused to take an oath that they were not Communists. About half the dismissed teachers announced their decision to fight the case in the law courts.

In April the governor of the state of New York, Thomas E. Dewey, approved a "master plan" prepared by the trustees of the New York State university for providing two-year and four-year colleges throughout the state to meet the needs of the total population from 18 to 21 years of age without distinction of sex, race, colour, creed, national origin or economic status. The plan was to run from 1950 to 1966 and assumed that 18% of the 18 to 19-year-old population would be provided with the opportunity to attend two-year colleges of the community college type, and 20% of the 18 to 21-year-old population to attend four-year colleges. It was announced in August that 50 American professors were to be seconded to teach in Japanese universities for the two years beginning April 1951 in the first large-scale effort since the war to take American teaching methods to Japan.

In February the University of St. Louis made Professor Gustave Kadysh Klausner a doctor of laws, the first time in its 132 years this university had thus honoured a faculty member. In March the University of Utah celebrated its centenary. It was incorporated by Brigham Young as the University of Deseret. In July Dr. Alfred Whitney Griswold became president of Yale university, the 16th president in 249 years. He succeeded Dr. Charles Seymour. Dr. Stephen Duggan, founder (1919) of the Institute of International Education, New York, died in August. Eleven mid-western universities pooled their libraries and research facilities to form an inter-library centre of the middle west situated at Chicago university.

Europe. *Albania.* In August the first ten Albanian students to graduate in Soviet universities returned home. In July Enver Hoxha spoke of the "immense openings" the U.S.S.R. had created for Albania in her universities. In September there were stated to be 900 Albanian students taking courses in the Soviet Union and the people's democracies.

Belgium. Ghent university students went on strike in April because the minister of education appointed, against the rector's wish, a non-Flemish-speaking professor. The minister capitulated.

Bulgaria. In March the central committee of the Communist party announced that the committee for science, art and culture had failed to take the necessary steps to eliminate bourgeois teaching in the Academy of Art, and ordered the reorganization of the academy on Marxist-Leninist principles. In April the president of the Academy of Science stated that a systematic effort was being made at his academy to apply the methods of dialectical materialism in all branches of science. In May the minister's council decreed that the faculties of medicine at Sofia and Plovdiv universities should become separate academies. Responsibility for all medical studies was transferred from the committee for science, art and culture to the Ministry of Health. In June the council decreed that 35% to 40% of students admitted to higher educational establishments in the year 1950-51 must be of working class origin and selected by the trade unions or the youth league.

Czechoslovakia. The academic year 1950-51 was the first in which the new university act was in force. This " guaranteed to the most capable sons and daughters of the working people access to the most advanced types of education, due account being taken of the needs and interests of society as a whole." Marxism-Leninism, it was stated, was to be the foundation of the training of all professional and political experts. In August it was stated that of the 1,495 workers attending the 16 university preparatory courses 1,448 had matriculated. In September the state committee for the universities met for the first time. One of its tasks was stated to be to eradicate the " aristocratic " spirit in the universities.

Western Germany. In August Dr. Heinrich Brüning, chancellor of the Weimar republic from 1930 to 1932, was unanimously elected by the faculty of political sciences at Cologne university to a chair in the faculty.

Eastern Germany. In July the Prussian Academy of Sciences at Berlin celebrated its 250th anniversary.

Greece. An army order in August allowed university students in their final year to defer military service and released those already serving.

Hungary. In June it was announced that a university city would be built at Miskolc, and that the theological faculties at Budapest (Roman Catholic), Debrecen (Calvinist) and Pécs (Lutheran) would be separated from the universities and transferred to the church authorities. In July free social services were granted to university students. In September it was announced that Budapest university would be renamed the Lorant Evetvoes university after the Hungarian scientist; a greater emphasis upon science was thus indicated.

Italy. The University of Trieste, Italy's youngest university, in November occupied its permanent buildings (begun in 1940) on a hill overlooking the city. It had six faculties and 2,500 students.

Poland. The secretary of the Warsaw Communist party drew attention in August to the high proportion of examination failures at the university and technical colleges. In the university faculty of law 75% of the 1,000 students in the 1946-47 class failed, and of 257 students in their fifth year only 7 graduated. At the polytechnic 75% of the students failed to graduate. In July it was announced that as there were too many applicants for Warsaw and Cracow, large numbers of candidates would be directed to other universities. The intake at Warsaw was over 7,000.

Portugal. In March it was announced that a Hernan Cortes university college was to be established at Salamanca, financed by the university, supervised by the Institute of Hispanic Culture and open to students from Portugal and Latin America.

Rumania. The ministers' council in May decreed compulsory labour for all students. In July the Ministry of Education was directed to guide, direct, co-ordinate and supervise the correct utilization of material means granted to students by the state. The number of students registered for 1950-51 was 57,000.

Saar. It was announced in April that statutes for the new University of the Saar had been drawn up and accepted. A product of the cultural agreement between France and the Saar, the university, located at Homburg, had four faculties: law, natural sciences, philosophy and medicine. It had also a training college for teachers, a school for interpreters and



Robert Anthony Eden, chancellor of Birmingham university, presenting degrees during the university's jubilee celebrations in 1950.

an institute of metallurgy. Lectures were delivered in French and German.

Spain. In May professors and students arrived from the Philippines for the first course specially arranged for them by Madrid university. In June a plan was reported to establish at this university a Hispano-Cuban college for 200 students, mostly Cubans, the rector always to be a Cuban. In October the engineering students of Madrid university, 700 in number, went on strike in protest against the government decree (issued in August) permitting the Roman Catholic (Jesuit) Institute of Arts and Industries to grant degrees to electrical engineering students. Protests were made at other universities.

U.S.S.R. A new university was opened at Ashkhabad, capital of the Turkmen S.S.R. This was the fourth to be opened in the U.S.S.R. since the war, the others being at Užhorod, Kishinev and Stalinabad. As a result of Stalin's pronouncement on linguistics new syllabuses in modern Russian, the history of the modern Russian literary language, the history of the grammar of the Russian language and the theory of Russian dialects were introduced into the universities and pedagogical institutes at the opening of the academic year 1950-51.

Yugoslavia. Over 600 million dinars were spent on buildings for the University of Belgrade. Buildings completed included the academy of engineering. The university city of New Belgrade, to accommodate 4,500 students, was also completed. In July and August 2,250 students from a dozen countries assisted the building of Zagreb university centre at Duprava. At this university before the war there were 50 scholarship holders; in 1950 60% were holders of scholarships. At Sarajevo (1,800 students) the proportion was over 80%.

Asia. *Israel.* The Hebrew University of Jerusalem celebrated its silver jubilee in April, having been formally opened on April 1, 1925, by Lord Balfour. At the time of the celebration it had not recovered its buildings on Mount Scopus (from which it was excluded in 1948); its 1,300 students were dispersed in 20 buildings in New Jerusalem. In February the president, Professor S. Brodetsky, announced that a joint fund-raising board for the university, the Weizmann Institute of Scientific Research at Rehovot, and the Haifa Technion had been established in the U.S. under the presidency of Professor Albert Einstein. It was hoped to raise $7,500,000.

China. In June a nine-day conference, the first of its kind, was held at Peking. It was attended by over 180 delegates from higher educational institutions throughout China and was addressed by Mao Tse-tung and Chou En-lai. It "broadly settled the main direction of New China's higher education." The aim was declared to be " to train all sorts of specialist personnel for construction in the new democracy, who would possess high educational qualifications, master the newest achievements of modern science and serve the people wholeheartedly." To fulfil this aim, higher educational institutions must " carry out revolutionary political education, eradicate feudal, comprador and fascist ideas and develop the ideology of service to the people." Professor Ma Hsu-lun, minister of education, outlined a three-point programme: (1) to link higher education with the needs of economic, political, cultural and national defence construction, (2) to open higher schools to workers and peasants and (3) to develop higher education step by step with national reconstruction along planned lines comprising centralized leadership (the Ministry of Education directly controlling universities and other higher education establishments), the reorganization of universities and colleges to make them more suitable for national construction, and the education and re-education of teachers.

The minister said there were 227 higher educational establishments—exclusive of short term colleges and those in Taiwan (Formosa)—with 134,000 students. There were 65 universities, 92 independent colleges and 70 vocational and technical colleges; 138 were publicly run, 65 privately and 24 by missions. During the summer vacation over 3,000 students from 11 universities in north China went into factories, mines and government organizations for vocational training. In October, as the result of a dispute with the Roman Catholic authorities, the government took over the Fu Jen university at Peking. The government radio stated that the university authorities claimed the power of veto over the employment of staff and demanded the removal of the chancellor and five " progressive " professors. There were also differences about administration, finance and curricula. It was further stated that freedom of religious belief was not affected.

Africa. *Egypt.* In February the king laid the foundation stone of the Farouk I university in Alexandria. The university, founded officially in 1942 but begun in 1938 as an offshoot of the Fuad I university, Cairo, had seven faculties: arts, law, engineering, medicine, science, agriculture, commerce. In August the government decided to create at Cairo university a chair for the study of Sudan history.

South America. *Argentina.* In July it was announced that the Eva Perón social aid fund would build a university city in Mendoza. Money from the same fund would cover the education of 400 foreign students at Cordoba university where building went on rapidly.

Brazil. Dr. Pedro Calmon relinquished in August the rectorship of the University of Brazil on being appointed minister of education.

Chile. The students in Concepción university, supported by the Federation of Chilean Students, went on strike in April against the emergency housing bill. This bill was to have been partly financed by a tax on the national lottery, the principal source of the university's income, with a resultant cut in the university's appropriation involving the closing of some colleges. The government capitulated.

Puerto Rico. The government authorized the university to spend $1 million on building and equipping a new library, designed to contain in the first instance 120,000 to 250,000 books and ultimately to house 500,000 books. (*See* also CAMBRIDGE UNIVERSITY; LONDON UNIVERSITY; OXFORD UNIVERSITY).

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UROLOGY. Examination of the urinary sediment for cells indicating malignancy in the genito-urinary tract had not proved to be as useful as in other clinical fields during 1950. Although the presence of definitely malignant cells in the centrifuged urine had been regarded as positive evidence of cancer in the urinary tract, the incidence of successful cytologic diagnosis had not been high according to many urologists. Most cells that have had their origin in a renal cancer when found in the urine appear washed out and may resemble the normal epithelial cell so closely that microscopic differentiation has been found difficult. This is particularly true of small malignant cells. Larger cells arising from a tumour in the renal cortex have been recognized more readily but they have been found in only a small percentage of cases. Malignant cells obtained from tumours of the renal pelvis and ureter have been found more frequently than those from tumours of the renal cortex. Since the absence of malignant cells does not exclude the possibility of tumours, negative results have even less diagnostic value than positive results. Although malignant cells have been found in the urine more

frequently with tumours in the bladder, the practical value of their discovery is but little since cystoscopy readily permits diagnosis.

Cancer of the prostate gland usually may be recognized on rectal digital examination by the presence of a firm irregular nodule in the gland. When the nodule is small and of a doubtful nature, tissue biopsy made through perineal exposure is usually employed. Examination of prostatic secretion obtained by massage has confirmed the presence of cancer in some cases; however, cytologic diagnosis was usually possible only in cases with advanced carcinoma of the prostate gland.

The comparative value of castration and administration of estrogen in the treatment of prostatic cancer was still a controversial subject in 1950. A competent appraisal of their relative value was offered in an article which studied the survival statistics of 1,818 cases of prostatic carcinoma (Reed M. Nesbit and William C. Baum, " Prostatic Carcinoma," *J.A.M.A.*, *143*, 1317-20, Aug. 12, 1950). The following deductions were made: (1) it was demonstrated conclusively that patients with prostatic cancer who responded to castration or estrogen therapy lived longer and more comfortably than did patients not treated by this method; (2) five-year control of prostatic cancer was most effectively obtained by the combined employment of orchiectomy and diethylstilbestrol in patients who were free from metastases; (3) when metastases were present, orchiectomy was significantly more effective than diethylstilbestrol; the combination of diethylstilbestrol and orchiectomy did not appear to offer any advantage over orchiectomy alone in this group of patients; (4) the maximum benefit was achieved by the institution of treatment as soon as the diagnosis was established. (W. F. Br.)

URUGUAY. Republic in southeastern South America, bounded N. by Brazil, E. by the Atlantic ocean, S. by the River Plate, and W. by Argentina. Area: 72,172 sq.mi. Pop.: (1908 census) 1,042,686; (mid-1949 est.) 2,353,000, mostly of European extraction. Language: Spanish. Religion: mainly Roman Catholic. Chief towns (pop., 1947 est.): Montevideo (cap., 850,000); Paysandú (50,000); Salto (48,000); Mercedes (33,000). President, Luis Batlle Berres.

History. Early in 1950 the treaty of friendship, commerce and economic development signed with the United States on Nov. 23, 1949, was submitted to the Uruguayan congress for ratification. The treaty dealt with the Point Four development programme and recognized the right of U.S. enterprises to hire technical staff regardless of their nationality and to receive a fair return on their investments. The Communists synchronized all their moves to hamper ratification of the treaty. They denounced the visit to Uruguay of Edward G. Miller, U.S. assistant secretary of state, and claimed the treaty would make Uruguay a U.S. colony. The Latin American Labour confederation, led by Vicente Lombardo Toledano, held a conference in Montevideo which coincided with a big strike in the wool industry. A speaking tour throughout the country launched by Christian M. Ravndal, the U.S. ambassador, with the approval of the Uruguayan government, explaining the democratic way of life, also brought about further Communist charges of U.S. intervention in local affairs.

In the presidential election held in November, the dominant Colorado party had three candidates: Andrés Martínez Trueba, president of the Bank of the Republic; César Mayo Gutiérrez, vice president of the republic; and Eduardo Blanco Acevedo, former cabinet member. The Blanco party opposition nominated its perennial candidate Luis Alberto Herrera, although some believed that a younger man should make the race. Martínez Trueba, the candidate backed by President Batlle, was elected and was to be inaugurated early in 1951. (J. McA.)

Education. Schools (1948): state 1,644, pupils 194,072; rural, pupils 52,815; private 180, pupils 32,448. University of Montevideo: students (1940) 2,670.

Agriculture. Main crops (1949-50, short tons): wheat 303,000, linseed 77,000; oats 44,000; barley 19,800. Livestock (1949 est.) cattle 8·7 million; sheep 23 million.

Foreign Trade. Exports in 1949 totalled U.S.$ 191·6 million; imports were $184·6 million. Chief exports: wool (35%); meat (21%); industrialized farm products (15%); hides and skins (15%). Chief imports: raw materials (26%); machinery (15%). Leading customers: U.S. (26%), U.K. (22%), Germany (11%). Leading suppliers: U.K. (23%), U.S. (21%), Brazil (11%).

Communications. Railways (1948) 1,874 mi. Roads (1948): 26,000 mi. including 3,051 mi. paved. On Dec. 31, 1949, there were 56,500 cars and 20,000 lorries. Merchant marine (June 30, 1949): 47 steamers and motor ships (100 tons and more) aggregating 84,598 gross tons. Telephones (Jan. 1, 1949): 77,686.

Finance. (Million pesos) budget (1949, actual): revenue 286·6, expenditure 288·8. Funded public debt (Dec. 31, 1949): 818·5. Notes in circulation (Sept. 30, 1950): 244·6.; bank deposits 413. Monetary unit: *peso* with an official exchange rate of 5·32 pesos to the £ and of 1·90 pesos to the U.S. $. (J. W. Mw.)

U.S.S.R.: *see* Union of Soviet Socialist Republics.

VARGAS, GETULIO DORNELLAS, Brazilian statesman (b. São Borja, Rio Grande do Sul, April 19, 1892). He was educated at the Porto Alegre faculty of law and the Rio Pardo military school. He became lawyer in Rio Grande do Sul and in 1909 was elected deputy from that state to the congress. After an interval when he resumed his practice of law, he was again elected deputy in 1919. He became minister of finance in 1926; served as president of his native state (1927-30) and led the revolutionary movement in 1930 that resulted in his being elected president of Brazil on Nov. 3 of that year. He served as president of the republic for 15 years. He sent a Brazilian division to fight with the Allied forces during the liberation of Europe. On Oct. 30, 1945, the Brazilian army forced his resignation on the grounds that it feared he would not hold promised elections, and he backed Eurico Gaspar Dutra, who won the presidential election of Dec. 2, 1945. Vargas re-entered politics for the 1950 campaign and won the election to the presidency on Oct. 3, 1950.

VARNISHES: *see* Paints and Varnishes.

VATICAN CITY STATE. Sovereign independent state, situated upon the Vatican hill in the city of Rome, established by the Lateran treaty between the Holy See and Italy on Feb. 11, 1929. The Pope is the sovereign. Area: 0·5 sq.mi., excluding the papal estate of Castel Gandolfo and the basilicas of St. John Lateran, St. Paul-Outside-the-Walls and St. Mary Major which also belong to the Vatican City state. Pop.: (1948 census): 890. Governor, Marchese Camillo Serafini.

The Holy Year (*q.v.*) was especially notable in the history of the Vatican City state for the solemn proclamation by Pope Pius XII of the dogma of the bodily Assumption of Our Lady, which took place in Piazza San Pietro on Nov. 1, 1950, in the presence of 35 cardinals and nearly 500 archbishops and bishops from all over the world. The bull in which the dogma was contained was entitled *Munificentissimus Deus.*

Another important event, of a different kind, was the publication of the *Instruction to Local Ordinaries on the Oecumenical Movement*, which, dated Dec. 20, 1949, was issued by the Holy Office at the end of February. This laid down the limits within which Catholics may co-operate with other Christians in common action. Conferences and

meetings might take place, with the permission of the local bishop, on condition that:

(1) there would be absolutely no *communicatio in sacris;*

(2) the discussions themselves would be duly supervised and controlled;

(3) at the end of each year a report would be sent to the Supreme Congregation of the Holy Office, giving a list of the places where such meetings had been held and an account of what experiences were gained.

On July 27 the Holy Office published a *monitum* warning parents that they might incur excommunication by permitting their children to associate with Communist influences; and several excommunications were pronounced during the year, as for example that by the Sacred Congregation of the Council, dated June 29, against those associated with certain current schismatic movements.

Pope Pius XII published three encyclical letters, the most important being *Humani Generis*, dated Aug. 12, against the penetration among Catholics of such " modern errors " as idealism, immanentism, pragmatism and existentialism. The other encyclicals were *Anni Sacri*, dated March 12, calling upon the faithful all over the world to open a " crusade of prayer for peace " on Passion Sunday, March 26; and *Summi Maeroris*, dated July 19, on the same theme of peace, and in some sense an answer to the Communists' " Stockholm appeal." Another important pontifical document was the apostolic exhortation addressed to the clergy of the world on Sept. 25, on the spiritual duties of the priestly state.

The College of Cardinals suffered the loss of Cardinal Luigi Lavitrano, who died in Rome on Aug. 2, reducing the numbers of the college to 53, of whom only 19 were Italian. Cardinal Lavitrano, for many years archbishop of Palermo, was called to the curia in 1945 and made prefect of the Sacred Congregation for the Affairs of Religious; Cardinal Clemente Micara was appointed on Nov. 13 to be his successor, remaining pro-prefect of the Sacred Congregation of Rites. Cardinal Konrad von Preysing, bishop of Berlin, died on Dec. 21.

Much interest was aroused during the year by the conclusion of 10 years' work of excavation underneath St. Peter's. Pope Pius XII blessed altars in the new crypt during the summer. (M. Dk.)

VEGETABLE OILS AND ANIMAL FATS. Preliminary reports for 1950 indicated that production of oils and fats in western Europe showed a substantial increase over 1949. This was due largely to the heavy 1949-50 olive crop but there was an appreciable rise in butter production, particularly in Denmark and the Netherlands, and the output of lard also was expanded. Total output in this region (excluding whale oil production by European ships) was probably within 5% of the prewar level. There was some decline in purchases from the dollar area, but imports from other sources showed a slight net increase. By 1950 consumer rationing had ended in all the countries of western Europe except Great Britain. In the latter country, where considerable progress had been made towards re-building stocks, the improvement in supplies in 1950 was reflected in the de-allocation of linseed oil and the de-rationing of soap.

West African groundnut production was reduced in 1949-50 by unfavourable weather. In Nigeria purchases in 1949-50 amounted to only 188,000 tons of shelled nuts, as against 323,000 tons in 1948-49, and in this area another short crop was harvested in 1950-51. Exports from Nigeria in 1950 were, however, maintained at a high level, current purchases being supplemented from stocks. Shipments in 1950 from French West Africa were also relatively heavy. Groundnut production increased in Southern Rhodesia in 1950 but declined in the Union of South Africa; there was a substantial rise in South Africa's output of sunflower seed. Preliminary data for 1950 suggested a further increase in the export of palm oil from African sources. Purchases in Nigeria, at 170,000 tons, were heavier than in 1949, when exports reached a record level, and the upward trend in the production and exports of the Belgian Congo was expected to continue. Exports of palm kernels from Africa showed a slight decline from the high 1949 level. In Egypt cottonseed production was maintained in 1949-50 at the relatively high level reached in the previous season. The Sudan, Uganda and Mozambique again exported fairly large quantities of cottonseed.

In India production of most of the main oilseed crops was heavier in 1949-50 than in the previous season. In particular, groundnut production rose to 3·4 million tons, as against 2·9 million in 1948-49. Little increase was to be expected in the volume of export supplies, which in recent years had amounted to scarcely one-fifth of the prewar average. Throughout most of 1950 the export of groundnuts from India was prohibited. Exports of copra and coconut oil from Ceylon were smaller in 1950 than in 1949.

The upward trend of Malayan production and exports of palm kernels and palm oil was continued in 1950, and shipments of copra showed a substantial increase over those of 1949. Exports of these products from Indonesia were, however, smaller than in the previous year; the reduction in copra shipments was substantial, increased supplies being needed for domestic consumption. Shipments of copra and coconut oil from the Philippines in 1950 were again moderately heavy, although the combined total, in terms of oil, was far short of the record level reached in 1947.

Little information was available concerning production in the U.S.S.R., China and Manchuria. It is notable, however, that in 1950 Manchuria re-emerged as an exporter of soya beans and soya bean oil to western Europe; in the U.S. moreover, a barter transaction was announced by the Commodity Credit corporation involving the shipment of Manchurian soya beans to Japan. In 1949-50 conditions were again favourable for dairy farming in Australia and New Zealand, and butter production exceeded the relatively high levels reached in 1948-49. Rain affected the crops sown by the Queensland-British Food corporation, but the yield of sunflower seed was much larger than in 1949. Production of whale oil in the Antarctic, where the size of the total catch is limited by international agreement, amounted in 1949-50 to 360,000 tons, as against 368,000 tons in 1948-49.

(D. M. T.)

United States. The domestic production of fats and oils in the U.S., including the oil equivalent of exported seeds in the year beginning Oct. 1950, was forecast at 11,980 million lb., almost the same amount as in the previous year. Domestic consumption of edible fats and oils was indicated at a per capita total of 45·2 lb. Total U.S. butter production in 1950 was estimated at 1,600 million lb., as compared with 1,735 million lb. in the previous year. The production of lard and pork fats amounted to 2,800 million lb.—an increase of nearly 150 million lb.

Export of fats and oils from the U.S., largely to western Europe, declined in 1950. For the first nine months of the year it amounted to 1,529·9 million lb., as against 1,843·1 million lb. in the previous period. Imports increased to 895·2 million lb. in the first nine months of 1950, as compared with 762·5 million lb. in the same period of 1949. Copra made up about half the total. (J. K. R.)

VEGETABLES. Western European producers in 1950 began to take alarm at the speed, allegedly damaging to horticulture, at which the freeing of intra-European trade was proceeding under the impulses provided by the Organization for European Economic Co-operation. At a special conference called in Paris during March delegates of the

International Federation of Agricultural Producers agreed to the principle of home producers' having the right to first place in the home market and to a corollary that both quotas and import duties could be justifiable means of securing this end. Both fruit and vegetable production had expanded quickly in Italy, the Netherlands and the United Kingdom after 1945. Markets expanded too for three or four years; and although Germany was expected to absorb as much after 1950 as before 1939, it was felt that with the gradual withdrawal of Marshall aid markets would not further expand and that international measures of regulation of supplies might become necessary and should be prepared in advance.

Meanwhile individual growers strove for greater efficiency. Irrigation was a focus of much interest, and a new, ground-level, trickle system was devised. Measures for the control of disease tended to become more preventive than corrective. From the U.S. a new compound to stop the sprouting of stored onions was announced. The trend towards greater capitalization and production for early markets was continued. The shortage of soft woods for glasshouse construction in the United Kingdom was overcome by wider use of aluminium, often in association with de-mountable dutch lights.

United Kingdom. Vegetables continued to tax the resources of producers, the skill of administrators and the patience of housewives till well into the autumn. Prospects for the 1950-51 winter season were much better than in the previous year: both green crops and root crops made good growth, and regular and good deliveries were foreshadowed. Acreages sown were slightly less than in 1949. The overall recorded area, at 528,000 ac., was 8% down; acreage of root vegetables was 6% lower, and all brassicae 1% lower. Green peas for the fresh market and leaf brassicae alone showed improvement on 1949 acreage. Celery and asparagus acreages were still significantly less than before World War II. But all categories of the flower industry—nursery stock, bulbs and flowers—were up by 10%, to within 10% of their 1939 total.

A solution to price instability in horticulture was sought in improved marketing. The Ministry of Agriculture endeavoured to get grading of supplies more widely adopted. At intervals during the year recommended grades were issued for watercress, mushrooms, kidney beans, broad beans, marrows, endives, cabbages, savoys, brussels sprouts, mustard and cress, onions, radishes, celery and artichokes; specifications for size, uniformity, colour and type, maturity and packaging (where applicable) were appended in each case. Growers were asked to report on the reception that the market gave to such graded consignments, with a view to further action in 1951. Generally the specification was for one " selected " grade. Nationalization of the distributive trade was discounted from government circles, but the Socialist Agricultural society made known its proposals for improving marketing and distribution. It rejected both producer control and commodity commissions and would have the responsibility given to a public marketing authority. This authority would (1) buy and sell both home and imported produce; (2) organize the bulking of supplies in producing centres, for sale in consuming centres; (3) adopt public auction at selling centres; (4) provide a growers' insurance fund; (5) supply market containers, market intelligence, grading and packing standards and an inspectorate by means of a package levy on sales; and (6) compile a register of producers and control the acreage under each type of product (*e.g.*, soft fruit, glasshouse produce). In practice developments took place along accepted lines. The producers' tomato and cucumber marketing scheme came into force on Oct. 1, subject to a confirmatory poll. The public enquiry precedent to a peas marketing scheme was held on July 18.

United States. Production features repeated those of 1949. Increasing *per capita* consumption, the growing population and the augmented defence programme, together with the fact that quantities of vegetables for processing had not of late years kept pace with consumer incomes, gave promise of sustained demand, and suppliers of truck crops aimed to supply the fresh market at a level slightly in excess of the 1949 figure of 8·2 million tons of 2,000 lb. It was expected that there would be reduced tonnages for processing. Potatoes were less in demand: they were again supported at 60% of parity on the basis of a farm price of $1·01 a bushel; and by July 25 5·6 million bu. had been purchased for price support (throughout 1949 75 million bu. had been thus purchased). Consumption of canned vegetables alone was at the rate of 38 lb. a head, and greater quantities were quick-frozen than in 1949. Mid-season stocks of canned vegetables were below average, but stocks of frozen vegetables were higher by about 7% in all categories except green peas. On July 1 stocks of green peas were one-third lower than in 1949; contracts for processing peas were indicated to be 13% larger. (*See* also AGRICULTURE; MARKET GARDENING; ROOTCROPS.) (R. R. W. F.)

VENEREAL DISEASES. The decline in the incidence of these diseases in Great Britain since 1946 (the peak year) was steadily maintained in 1950. But at the same time the number of cases of early syphilis treated in the clinics was still higher than that recorded in 1939 at the outbreak of World War II. In 1948 there were 10,637 cases of early syphilis and 30,312 cases of gonorrhoea treated in clinics, whereas in 1949 the numbers, as given in the Ministry of Health's report, were 6,812 and 24,487 respectively. In 1948 there were 372 children under one year of age treated for congenital syphilis, but in 1949 the number had been reduced to 355; and the incomplete reports for 1950 indicated that the number had been reduced even further. It should be noted however that many of the children in whom syphilis was diagnosed by positive serological reactions during the first few weeks of life but without any signs or symptoms were not necessarily suffering from the disease, though included in the ministry's figures. It is therefore reasonable to assume that the incidence of the disease is actually lower than that recorded.

A very large number of patients attended treatment centres suffering from venereal diseases other than gonorrhoea or syphilis. Many of the men had non-gonococcal urethritis, many of the women non-gonococcal cervicitis or vaginitis. In 1947 the number of male patients grouped in this category was 53,766, a figure which in 1948 rose to 56,435; in 1949 it was 52,526; and the figures for 1950 indicated that the number had not lessened. Non-gonococcal urethritis was the venereal disease with the highest incidence in the male in Great Britian, the Commonwealth and Europe. The infective agent in a large proportion of such cases was proved to be either the pleuropneumonia-like organism or a virus. The apparent increase in the incidence of this disease was due chiefly to the fact that before chemotherapy came into use many workers had reckoned cases of it as gonorrhoea even though Neisser's organism (the gonococcus) could not be detected at any stage of the illness. The infectious latency of the gonococcus was, in general, overstressed.

The incidence of chancroid in Great Britain and Europe had diminished considerably, the few cases reported being, as heretofore, mostly in large seaport towns. In France the incidence showed a particularly marked decline, and in H. Gougerot's large clinic in Paris only three cases were encountered during 12 months. Sweden also showed a marked decline in the incidence of this complaint, of which there had been 88 cases in 1948.

At the meeting of the Société Française de Dermatologie et de Syphiligraphie held in Paris in March 1950 all the

French workers reported a marked diminution in the incidence of syphilis: H. Gougerot had 367 cases in the early stages of the disease in 1948 but only 194 in 1949. At the same conference L. Perrin reported that records of the health dispensary of the Prefecture of Police in Paris showed an increase in the number of prostitutes suffering from gonorrhoea (706 cases in 1948, 1,168 in 1949); this apparent increase may however have come about because more efficient methods in the cultural examination of secretions revealed disease in cases where gonococci would previously not have been detected.

Great efforts were made to improve the methods of diagnosis and treatment of venereal diseases prevalent among the natives of Kenya, Southern Rhodesia and other parts of Africa; but the incidence remained high in all regions. The report of R. R. Willcox on Southern Rhodesia showed that approximately 70,000 of the African population of 1,898,000 attended hospital annually for treatment of the diseases. However, it was gratifying to note that special examinations by dark-ground illumination were then being carried out to differentiate between syphilitic and chancroidal lesions. There was a very high incidence of chancroid in the African population, in some areas higher than that of syphilis. Large numbers of Africans also suffered from gonorrhoea; but, as Willcox once stated, many of the sufferers of both sexes regarded the disease as " an annoying variant of normality."

It was hoped that in the not-too-distant future an undertaking similar to the one then being carried out in Haiti (the largest anti-venereal disease campaign ever launched) would be organized in Africa. The Haitian scheme, an immense and expensive undertaking to eradicate gonorrhoea, syphilis and yaws by two injections of penicillin, was sponsored by the World Health organization and the United Nations International Children's Emergency fund.

Important advances were made in treatment, particularly of non-gonococcal urethritis. Though streptomycin was successful in a small percentage of cases, aureomycin was proved conclusively to be effective in the treatment of both acute and sub-acute abacterial urethritis. Half a gramme of the drug administered orally every eight hours to a total dosage of four grammes was curative in 90% of such cases. Aureomycin, however, was shown to be not so effective in the treatment of the blood-borne complications (the so-called Reiter's disease) unless combined with fever therapy. Penicillin remained the drug of choice in the treatment of both syphilis and gonorrhoea, the preparation most favoured being a suspension of procaine penicillin in oil with 2% aluminium monostearate.

The work carried out by R. A. Nelson *et al.* on treponemal immobilizing antibodies was successful in the detection of biological false positive serological reactions. It was planned by the World Health organization to use this test in large scale investigations in Africa and around the eastern Mediterranean to determine the relationship between syphilis, yaws and bejel, diseases which are caused by morphologically indistinguishable spirochaetes. (A. H. H.)

United States. The downward trend in total numbers of reported cases of syphilis and gonorrhoea continued during 1950; mortality rates from syphilis and admission rates to mental hospitals were lower than in previous years. There was also continuing evidence that the incidence of syphilis might be decreasing. First advanced in 1949, this encouraging view of the progress of syphilis control was based on a combination of factors observed in studying reports from health departments. The most important of these factors were a consistent reduction in the number of reported cases of early infectious syphilis; decreases in the discovery rate of early latent syphilis; increased efforts by health departments to find cases of syphilis; and no evidence of a decline in the quality of syphilis morbidity reporting.

Nevertheless, syphilis was still considered a major public health problem. Deaths from this disease still exceeded 10,000 annually. Admissions to mental institutions for conditions resulting from syphilis were estimated at 6,000 for 1949, the latest year for which such an estimate was available. Thousands of new syphilitic infections were occurring, and, according to estimates, less than 50% of the cases were coming under medical care during the early stages of the disease, when treatment is most effective. Moreover, undiscovered cases of congenital syphilis in children ten years of age or less were estimated to number 100,000.

In the continental United States, the general mortality rate from syphilis had declined each year since 1936. This rate, which was 15·9 per 100,000 population in the calendar year 1938, was estimated at 7·6 in 1949 (employing the fifth revision of the *International List of Joint Causes of Death*). The infant mortality rate from syphilis decreased from 0·63 per 1,000 live births in 1938 to 0·12 in the calendar year 1948, less than one-sixth the rate of 1933.

Reported cases of syphilis in the United States and territories (excluding the armed services) numbered about 240,000 in 1950, as compared with 576,000 in 1943. During the same period, the number of reported cases of late and late latent syphilis decreased from 257,000 in 1943 to an estimated 116,000 in 1950.

Among civilians in the United States and territories, reported cases of congenital syphilis numbered about 15,000 in 1950. This figure represented a substantial decrease from 1941, when 18,000 cases were reported. Over the preceding six years, however, the level of reported cases had remained substantially constant.

In 1941 cases of gonorrhoea reported among civilians in the United States and territories began an upward trend. After the peak year of 1947, however, when 410,000 cases were reported, annual declines were recorded, the probable figure for 1950 being 308,000 cases. (*See* also BACTERIOLOGY.)

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VENEZUELA. Republic on the north coast of South America, bounded N. by the Caribbean sea, E. by British Guiana, S. by Brazil and W. by Colombia. Area: 352,143 sq.mi. Pop.: (1941 census) 3,850,771; (mid-1949 est.) about 4,595,000. No official attempt has been made to estimate racial distribution, but the majority of the population is *mestizo*, Negro and mulatto. Language: Spanish. Religion: mainly Roman Catholic. Chief towns: Caracas (cap., 385,000); Maracaibo (275,000); Valencia (65,000); Barquisimeto (60,000). Executive power was exercised throughout 1950 by the military junta composed of Lieut. Colonels Carlos Delgado Chalbaud, Marcos Pérez Jiménez and Luis Llovera Páez, until the death of the first named on Nov. 13; he was replaced by a lawyer, Germán Suárez Flámerich.

History. The outstanding political event of 1950 was the assassination of the president of the junta on Nov. 13. Col. Delgado Chalbaud was attacked by 18 men, who apparently intended to kidnap him, but the plan miscarried: the president was killed. An exhaustive police investigation was undertaken, a final report on which had not appeared when the year ended.

No disorder occurred in the republic and, after a fortnight

of emergency regulation, civil rights were restored. On Nov. 24, the creation of two new ministries, Justice and Mines and Petroleum, was announced, as well as plans for an election in 1951.

Of importance, too, was the suppression of the Communist party, which had survived its offshoot, Acción Democratica, by 18 months. This occurred when 47 Communist-affiliate oil workers' unions were dissolved in consequence of an illegal strike. Employment remained at a high level throughout the year. Immigration brought some 20,000 Europeans to Venezuela. (C. McG.)

Education. Schools (Oct. 1949): primary 5,300; pupils 464,697; secondary and special schools, public and private 137, pupils 21,723; teachers' training colleges 27, pupils 3,068; the Central university had 4,210 students, Los Andes 738 and Zulia 664.

Agriculture. Agriculture still failed to meet the basic needs of the people. Output of coffee, the chief export crop, totalled 480,000 bags (of 132 lb.) in 1949-50; exports in 1949 were about 367,000 bags. Exports of cacao (1949) were 15,000 short tons. Sugar production (1949) was about 39,250 short tons; maize 320,000 tons; rice 11,000 tons and tobacco 3,100 tons. There were about 3 million cattle and 1·5 million goats.

Industry. Production figures in 1949 included: cement 330,385 short tons; electric energy 408·6 million kwh.; natural gas 14,065·8 million cu.m. Textile mills supplied about one-third of domestic needs. Petroleum continued to be the dominant factor in the economy. Production in 1949 fell slightly to 482·3 million bbl. (1948: 490 million bbl.). Refinery output by the 11 refineries and topping plants in operation in 1949 totalled 53,066,648 bbl. Two additional refineries went into operation in 1950 and two more were scheduled for completion early in 1951. Production of other minerals in 1949 included 61,177 oz. of gold and 56,655 carats of diamonds. In July 1950, Iron Mines Co. of Venezuela, a Bethlehem Steel subsidiary, made the first rail shipments of iron ore from its concession in the El Pao area south of the Orinoco to the river port of Palau; ocean shipments were scheduled to begin in the spring of 1951. During the year Orinoco Mining Co., a U.S. Steel subsidiary, continued preliminary development of its rich concession south of Ciudad Bolivar.

Foreign Trade. (Million bolivares, 1949) Exports 3,360·4; imports 2,241. Chief exports: crude petroleum and petroleum products (97%); coffee (1%); cacao (1%). Chief imports: machinery and equipment (32%); metals and manufactures (20%); foodstuffs and beverages (17%). Chief suppliers: U.S. (74%); U.K. (8%). Chief customers: the Netherlands Antilles (56%, petroleum for refining); U.S. (29%).

Communications. Railway equipment remained obsolete and in need of repair; trackage totalled 700 mi. in 1950. The road system included 3,750 mi. of all-weather roads and 1,600 mi. of unimproved, dry-weather roads. Merchant marine (1949): 79 steamers and motorships (100 tons and over) aggregating 136,700 gross tons.

Finance. (Million bolivares) budget (1949-50, actual): revenue 1,889, expenditure 1,984·6. No external debt. Domestic debt (Dec. 31, 1949): 15·1. Currency in circulation (Sept. 31, 1950): 709; deposit money: 788. Monetary unit: *bolivar* with an official exchange rate of 9·38 bolivares to the £ and 3·35 bolivares to the U.S. $. (J. W. Mw.)

VENIZELOS, SOPHOCLES, Greek army officer and statesman (b. Canea, Crete, Nov. 17, 1894), son of Eleutherios Venizelos. He was educated at the Greek Military academy and served in World War I and in the Anatolian campaign (1919-20). Entering politics, he was elected deputy for Canea on Nov. 14, 1920, when the Liberal party led by his father was heavily defeated at the polls. He left Greece but in Oct. 1922, was appointed military attaché in Paris by the revolutionary Plastiras government and retained this post until 1931. Returning to Greece, he became a member of the executive committee of the Liberal party but left the country again after the establishment, on Aug. 4, 1936, of the Metaxas dictatorship. He lived in France and the United States, joined the Tsouderos cabinet in March 1943 as minister of marine and for a while (April-May 1944) was the head of the government in exile then based on Cairo. Elected deputy on March 31, 1946, he joined the Tsaldaris cabinet as minister without portfolio (April 1946). In the Maximos cabinet (Jan. 1947-Nov. 1948) Venizelos was deputy prime minister and again in the Diomidis cabinet (July 1949-Jan. 1950). After the election of March 5, 1950, he formed a minority Liberal cabinet (March 23-April 14), a centre coalition cabinet (Aug. 21-Sept. 9) and a cabinet based on a Liberal-Populist-Social Democratic coalition on Sept. 13.

VETERINARY MEDICINE. The main advance in British veterinary medicine in 1950 was in planning to eradicate tuberculosis in cattle. The necessary governmental action was assured, under which it would be possible to designate certain areas of low incidence of the disease as tuberculosis-free: in these areas all cattle subsequently reacting to the tuberculin test would be disposed of. From a number of such tuberculosis-free areas (one of which, in Ayrshire, was to be based on the site of an experimental eradication scheme in the 1930s), it was proposed to spread the eradication of the disease gradually through the whole country by means of tuberculin-testing all bovines and disposing of all reactors.

Studies of infertility in cattle received a great impetus from the results of the artificial insemmination centres in several countries in Europe and America, where the careful records of breeding performance disclosed infertility of many kinds. Apart from the causes more commonly accepted it became apparent that factors of environment and diet probably played a significant part in infertility in herds where no other cause could be found. In a few cases reported from Scandinavia and Britain semen defects in the bull were perhaps responsible, and in isolated instances infection with *Vibrio foetus* was an important cause of herd infertility.

Work on mastitis-control continued with the newer chemotherapeutic and antibiotic agents. In general the results noted in 1950 were confirmed, but a disquieting feature was the increasing proportion of cases which appeared to respond less well to penicillin. Leptospirosis of cattle was reported in England under conditions similar to those previously reported in the U.S. and Australia.

The epidemic of foot-and-mouth disease in Mexico was brought under control by the energies of a joint Mexican-U.S. commission. In Europe the disease did not assume epidemic proportions.

The control of rinderpest (cattle plague) was prosecuted with vigour under United Nations auspices in southeastern Asia, while in Egypt much progress was made in controlling the disease in the Nile delta. In central Africa the attack against bovine trypanosomiasis was advanced in two ways. First the new chemotherapeutic agent "Antrycide" constituted under selected conditions a potent weapon for prophylaxis and treatment, although some evidence of the development of drug-resistant strains of trypanosomes appeared. Secondly bush-clearance schemes, carried out with a view to large-scale production of groundnuts and sunflower seeds in Tanganyika, removed the breeding haunts of the tsetse flies largely responsible for transmitting the disease and permitted the introduction of cattle into areas from which they had previously been excluded because of heavy losses from trypanosomiasis.

The use of the crystal violet vaccine against hog cholera (swine fever) continued to spread in the U.S. Experimental studies in the U.S. and Scotland confirmed the opinion that exposure to cold damp conditions seriously endangered the lives of baby pigs soon after birth. In Northern Ireland and England there were reports of deaths of weaned pigs associated with oedema of the bowel wall.

In sheep husbandry an important advance was the control of blow-fly strike and of parasitic skin diseases, such as scab, by the use of the newer insecticides. Dips and jetting fluids containing benzene hexachloride, etc., were shown to be particularly effective against blow-fly strike. Furthermore, by their residual persistence on the fleece for about a month, these drugs reduced the subsequent incidence of primary

strike very significantly. This considerably relieved shepherding duties during the summer season in many of the sheep-producing areas of the world. In Scotland the enzootic abortion, which has been recognized for many years, was shown by Edinburgh workers to be due to an infectious agent.

In dogs the problem of non-rabid encephalitis, which had been particularly prevalent since 1945 in western Europe, Australia and parts of Africa, was shown to be more complex than the work reported in 1948 would suggest: a number of viruses were involved, and it was indicated that clinical signs of so-called encephalitis were not always due to demonstrable inflammation of the brain. Though agenized wheat products, a known cause of canine hysteria, were markedly reduced in feedingstuffs for dogs, canine hysteria occurred with some frequency and was not necessarily due to an encephalitis. It was evident that much more research would be required before the aetiology and significance of these nervous disorders in the dog were understood. Rabies continued to be a serious problem in certain parts of the U.S., and a new prophylactic inoculation for dogs showed much promise. Viral hepatitis of dogs, reported from Sweden in 1947, was recognized in many parts of the world, including western Europe and Australia, as well as in North America, where it was first discerned many years ago. Work in England at the Canine Research station of the Animal Health trust indicated that it was an important cause of distemper-like disease.

In horses the importance of red-worm infestation of young stock was confirmed, and various measures to reduce the residual infestation of pastures were devised. A new intravenous anaesthetic, β-naphthoxyethanol, showed promise of proving a useful short-acting anaesthetic agent for the horse.

In the poultry industry the control of coccidiosis was advanced by the introduction of the deep-litter system of rearing, which kept infestation of the birds with coccidiosis down to a level at which the infection produced little ill-health but allowed the development of resistance to subsequent heavy infection. This method, used in conjunction with sulphonamide drugs in the drinking-water or mash, appeared to offer a practical means of controlling the disease and was adopted on a wide scale in North America and Europe. (W. R. W.)

VICK, SIR GODFREY RUSSELL, British lawyer (b. West Hartlepool, Co. Durham, Dec. 24, 1892), was educated at the Leys school, Cambridge, and Jesus college, Cambridge. He served in World War I, and in 1917 was called to the bar of the Inner Temple, of which he later became a bencher. He was recorder of Richmond, Yorkshire, 1930-31, of Halifax, Yorkshire, 1931-39, and of Newcastle-upon-Tyne from 1939. He took silk in 1935 and became chairman of the General Council of the Bar in 1948. In the 1950 Birthday Honours, he was knighted. In September he went to Washington for a joint meeting of the American and Canadian Bar associations. In 1947-48, Sir Godfrey had been master of the Curriers company.

VIRGIN ISLANDS. The Virgin Islands (Danish West Indies until 1917) have the status of an organized but unincorporated territory of the United States, 40 mi. E. of Puerto Rico. The three largest islands, with a total area of 133 sq.mi. are St. Croix (pop. 12,096, preliminary census of 1950); St. Thomas (13,811) and St. John (747). Language: mainly English. Religion: Christian (Protestant and Roman Catholic). Chief towns: Charlotte Amalie, the capital, on St. Thomas (11,463), Christiansted (4,110) and Frederiksted (1,925) on St. Croix. Governor, Morris F. de Castro.

History. The $10 million federal public works programme was considerably advanced during 1950. The salt-water fire protection and sanitary sewer facilities and intercepting sewer in Charlotte Amalie, Christiansted and Frederiksted were substantially completed. The potable water facilities for St. Thomas and St. Croix were nearing completion. The airstrips at the Alexander Hamilton field in St. Croix and at the newly renamed Harry S. Truman airport in St. Thomas were resurfaced. A contract was awarded for extensive waterfront improvement in St. Thomas, and work was to begin during the next fiscal year. Contracts were also let for telephone communication facilities in St. Thomas and St. Croix. The new abattoir at St. Thomas was in operation by private enterprise through a lease negotiated with the municipality of St. Thomas and St. John.

Education. Enrolment in the public schools of the Virgin Islands totalled 4,604, including 2,919 in St. Thomas.

Agriculture and Industry. A total of 99,482 tons of sugar cane was harvested by the Virgin Islands corporation during 1950, compared with 45,252 tons in 1949. About 10,752 tons of sugar were produced, compared with 4,579 tons in 1949. A total of 661,943 proof gallons of alcoholic beverages was exported as compared with 444,248 proof gallons in 1949.

Trade. Although the value of goods imported into the Virgin Islands during the calendar year 1949, $9,967,225, showed a slight increase over the value of imports in 1948, $9,465,562, there was a marked increase in the value of exports in 1949, $2,501,056, as compared with $1,698,037 for 1948.

Finance. Budgeted expenditures of the municipality of St. Thomas and St. John amounted to $1,230,888 including $279,200 which was allocated from the federal deficit appropriation. In the municipality of St. Croix, the allocation of $465,800 from the federal deficit appropriation enabled the municipality to meet its total budgeted expenditures of $825,100. (M. F. DE. C.)

VIRGIN ISLANDS, BRITISH: *see* LEEWARD ISLANDS.

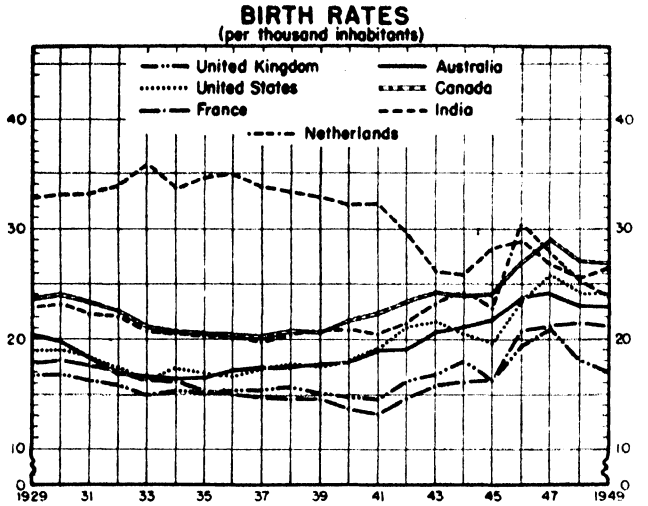
VITAL STATISTICS. Births. By 1950 the postwar waves of high births had declined in most countries. Such figures as were available by the end of the year suggested that something approaching a normal postwar level had been reached. In the United Kingdom the birthrate fell between 1949 and 1950 but nevertheless the number of legitimate births in 1950 was about 12% higher than in the years immediately before World War II. Most of this increase was due to the higher level of marriages and not to any increase in the average size of family which had varied little in Great Britain over the previous 20 years. The Netherlands had the highest birth rate among western European countries just after the end of the war but it had fallen from its peak of 30·2 per thousand inhabitants in 1946 to 23·7 for the full year 1949 and again farther to 23·0 in the first nine months

TABLE I. BIRTH RATES

(Number of Live Births per 1,000 inhabitants)

	1911-13	1925-29	1935-39	1946-49	1950 Nine months
Austria	24·9	—	14·7	17·0	15·3
Belgium	22·7	18·7	15·6	17·7	17·3*
Czechoslovakia	29·6	23·7	17·0	23·2	—
Denmark	26·3	19·9	17·9	21·2	20·1†
France	18·1	18·4	14·9	21·0	21·8*
Germany	27·0§	19·0	19·4	16·4‡	16·2‡
Ireland	22·6	20·2	19·4	22·3	22·1*
Italy	31·7	26·7	23·2	21·6	19·5
Netherlands	28·1	23·4	20·3	26·8	23·0
Norway	25·4	18·7	15·1	21·1	20·9*
Portugal	35·1	—	27·2	25·1	24·0*
Spain	31·2	29·1	22·0	21·8	20·3*
Sweden	23·6	16·4	14·5	18·6	17·7*
Switzerland	23·8	17·7	14·4	19·2	18·7
United Kingdom	24·3	17·6	15·3	18·8	16·5
Argentina	37·4	—	25·1	—	—
Canada	—	24·0	20·3	27·4	26·1*
Mexico	—	—	43·5	44·6	45·3*
United States	25·1‖	20·2	17·1	24·3	23·4
India	38·6¶	—	33·8	26·8	23·3*
Japan	34·9	34·1	29·2	31·9	28·9
South Africa	31·9	26·2	24·7	26·9	26·3
Australia	28·0	21·6	17·2	23·4	23·2*
New Zealand	—	20·2	17·3	25·5	24·6

* Annual rate during first six months. † Annual rate during first three months.
‡ Western Germany. § 1913. ‖ 1915. ¶ Including Burma.



of 1950, and from 1948 onwards the Netherlands rate had been exceeded by that of Portugal. But the greatest increase over prewar rates in Europe occurred in France and the postwar level remained remarkably steady, showing practically no decline as in most other countries. For the years 1946 to 1949, the annual birth rate in France varied only between 20·6 and 21·2 while in the first six months of 1950 the figure was 21·8 compared with 22·0 in the corresponding period of 1949.

In the Dominions, birth rates continued at a high level compared with Europe and, although there was some falling off from the 1947 peak, the 1949 rates in both Canada and Australia were 33% higher than those of 1935-39 and in New Zealand the rise was as much as 42%. In South Africa the increase in 1949 over prewar was only 8% while in India the birth rate continued to show the almost uninterrupted decline which had been going on since the early part of the 20th century. From as high a figure as 39 in 1911-13, the Indian birth rate had fallen to about 34 in the 1930s and to 23·3 in the first nine months of 1950 as compared with 23·9 in the corresponding period of 1949, the comparison being necessarily between British India up to 1947 and the Dominion (later Republic) of India subsequently.

In the United States the data up to 1949 showed that the highest number of births ever recorded was in 1947 when they totalled 3,910,000. In 1949 the number was only a little below this peak at 3,729,000.

TABLE II. MARRIAGE RATES
(Number of Marriages per 1,000 inhabitants)

	1926-30	1935-39	1940-44	1946-49	1950 Nine months
Austria	7·5	10·3	8·2	10·0	9·1
Belgium	9·1	7·4	6·0	9·7	7·4*
Czechoslovakia	9·3	8·5	8·5	10·4	—
Denmark	7·8	9·2	9·2	9·3	6·0†
France	8·2	6·5	5·5	10·1	7·3*
Germany	8·7	9·8	—	9·8‡	10·0‡
Ireland	4·6	5·0	5·5	5·6	4·9*
Italy	7·3	7·5	5·9	8·6	6·9
Netherlands	7·7	7·9	7·5	9·7	6·0
Norway	6·1	8·1	—	9·0	6·7*
Portugal	6·9	6·5	7·1	7·8	6·9
Spain	7·3	5·5	7·3	8·9	6·8*
Sweden	6·7	9·0	9·6	8·5	7·3*
Switzerland	7·5	7·3	8·2	8·5	8·0
United Kingdom	7·5	8·9	8·7	8·9	8·5
Argentina	7·5	7·0	7·5	—	—
Canada	7·3	7·9	10·1	10·0	6·8
Mexico	—	6·8	7·5	6·0	6·4§
United States	9·9	10·7	12·0	13·3	10·0*
Japan	8·0	8·1	—	—	—
South Africa	9·3	10·9	10·9	—	—
Australia	7·5	8·8	10·5	9·9	9·7*
New Zealand	7·7	9·6	8·8	10·7	9·1

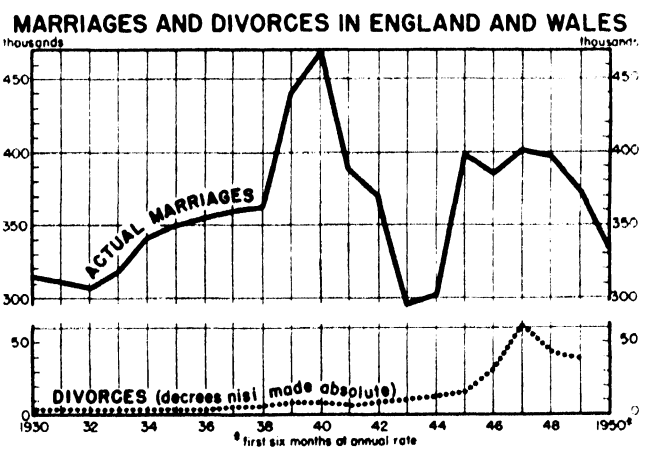
* Annual rate during first six months. † Annual rate during first three months. ‡ Western Germany. § Annual rate during first five months.

Marriages. The numbers of marriages per thousand inhabitants were high in most belligerent countries in the early years of World War II and immediately after the end of the war. Between 1947 and 1950 there was a decline in the marriage rates of most countries which was only to be expected since the war tended to make people marry younger and these marriages were therefore in a sense "borrowed" from the future. In England and Wales, for instance, 45% of women at ages 20-24 were married in 1947 compared with 34% in 1939 and 26% in 1931. The most striking variations in marriage rates occurred in the United States where, in 1946, the marriage rate reached the exceptionally high figure of 16·2 per thousand inhabitants but by 1949 had fallen to 10·7—the same as the 1935-39 level.

Between 1932 and 1939 the numbers of marriages in Great Britain rose substantially year by year. World War II accelerated the upward trend in the years 1939 to 1941 and again after the end of the war the level of marriages was very high. Divorces had more than kept pace with the higher level of marriages. In England and Wales between 1930 and 1949, the numbers of decrees nisi made absolute in any one year reached a peak in 1947 with 60,190, as compared with an annual average of about 4,700 in the 1930s. In the same period, divorces in the United States were highest in 1946 at 610,000, as compared with an annual average of about 211,000 in the 1930s. By 1948 and 1949 divorces declined to 408,000 and 386,000 respectively.

TABLE III. MARRIAGES AND DIVORCES IN ENGLAND AND WALES

Period	Actual Marriages	Divorces (Decrees nisi made absolute)
1930-34	318,900	3,900
1935-39	373,000	5,400
1940-44	365,700	8,800
1945	397,600	15,600
1946	385,600	30,300
1947	401,200	60,200
1948	396,900	43,700
1949	373,100	40,600
1950 (six months)	167,000	—



Deaths. In most European countries death rates in 1949 were slightly higher than the record low levels of 1948. The exceptions were Germany, Norway and Switzerland, all of which reduced their rates by the small amount of 0·1 per thousand inhabitants. Also in the United States, Canada, India, Japan and Australia the downward trend in death rates which had been characteristic of this century continued. The most striking declines were recorded in those countries in which there was most room for improvement. India had reduced its death rate in the 15 years before 1950 by 31% and Mexico by 23%. An even greater improvement occurred in Japan where the death rate (for Japanese nationals only in four main islands) in 1935-39 averaged 17·4 per thousand inhabitants whereas in 1949 it was 33% lower at 11·6—a

TABLE IV. DEATH RATES
(Number of Deaths per 1,000 inhabitants)

	1911-13	1925-29	1935-39	1946-49	1950 Nine months
Austria	18·8	—	14·0	12·8	12·1
Belgium	15·3	13·6	13·2	13·1	13·2*
Czechoslovakia	20·4	15·5	13·2	12·4	—
Denmark	13·0	11·1	10·6	9·4	9·9†
France	19·0	17·2	15·3	13·1	13·7*
Germany	14·8	12·0	11·9	11·0‡	10·3‡
Ireland	16·4	14·4	14·3	13·5	14·1*
Italy	19·3	16·3	13·9	11·2	9·6
Netherlands	13·1	10·0	8·7	8·0	7·4
Norway	13·3	11·0	10·3	9·1	9·1*
Portugal	20·7	—	15·9	13·7	11·7
Spain	22·2	18·6	17·9	11·8	11·4*
Sweden	13·9	12·1	11·7	10·3	10·5*
Switzerland	14·8	12·1	11·6	11·0	10·0
United Kingdom	14·2	12·5	12·2	11·7	11·5
Argentina	16·8	—	12·3	—	—
Canada	—	11·0	9·8	9·3	9·4*
Mexico	—	—	23·3	17·6	16·0§
United States	13·9‖	11·8	11·0	9·9	9·6
India	29·9¶	—	22·5	17·8	16·1*
Japan	20·7	19·8	17·4	14·0	11·1
South Africa	10·3	9·7	9·8	8·9	9·5
Australia	10·9	9·4	9·6	9·9	8·9*
New Zealand	—	8·6	9·0	9·3	9·6

* Annual rate during first six months. † Annual rate during first three months. ‡ Western Germany. § Annual rate during first five months. ‖ 1910-14. ¶ Including Burma.

figure below that of the United Kingdom and many other European countries. In Europe, Italy had made the greatest strides and since 1911-13 its death rate had been halved. The Netherlands continued to hold the record among the principal countries of the world with its 1948 figure of 7·4. For the first nine months of 1950 the death rate in the Netherlands averaged 7·4 compared with 8·4 and 7·2 in the corresponding periods of 1949 and 1948.

Infant Mortality. Sweden set up a new low record for infant mortality in 1949 with the rate of 20 per thousand—exactly one-third of the rate in that country in the years following World War I. Other countries with rates below 30 in 1949 were New Zealand, Australia and the Netherlands. Figures for 1948 and 1949 showed a marked improvement on the prewar level and in a number of countries the rate had been about halved since 1921-25. The highest rates were recorded in the countries of eastern Europe, in South America, India and Portugal. But the latest available figures for eastern Europe relate to 1947 and there was no figure for the Soviet Union more recent than 1940 when the infant mortality rate was about 140 per thousand.

TABLE V. INFANT MORTALITY
(Deaths of Infants under One Year of Age per 1,000 Live Births)

Country	1921-25 Average	Latest Year	Country	1921-25 Average	Latest Year
Austria	136*	76 ('49)	Spain	143	74 ('49)
Belgium	100	57 ('49)	Sweden	60	20 ('49)
Bulgaria	156	129 ('47)	Switzerland	65	34 ('49)
Czechoslovakia	155	83 ('48)	United Kingdom	78	34 ('49)
Denmark	82	35 ('48)	Yugoslavia	151†	132 ('38)
Finland	96	59 ('47)	Argentina	116	79 ('46)
France	95	56 ('49)	Canada	98	43 ('49)
Germany	122	—	Mexico	223*	103 ('48)
Hungary	187	111 ('47)	United States	74	31 ('49)
Ireland	70	49 ('48)	India	182	131 ('48)
Italy	126	74 ('49)	Japan	159	76 ('47)
Netherlands	64	27 ('49)	South Africa	73	40 ('49)
Norway	52	30 ('48)	Australia	58	25 ('49)
Portugal	145	115 ('49)	New Zealand	43	24 ('49)
Rumania	201	199 ('47)			

* 1922-25. † 1926-30.

Reproduction Rates. In nearly all countries in western Europe the rate of growth of population had declined considerably since the end of the 19th century, the Netherlands being the only one in which rapid growth continued. This slackening was also seen—although to a less extent—in the United States and countries of European origin. But in most of southern and eastern Europe, the rate of expansion had not fallen much and in Asiatic countries, which were at much earlier stages of population history, it had been increasing.

TABLE VI. NET REPRODUCTION RATES

Country	Year	Rate	Country	Year	Rate
England and Wales	1935-39	0·788	Belgium	1939	0·859
	1949	1·02		1947	1·002
Scotland	1935-39	0·918	Denmark	1935-39	0·950
	1946	1·192		1947	1·269
Canada	1935-39	1.154	France	1935-39	0·896
	1945	1·330		1944	0·940
United States	1935-39	0·978	Netherlands	1935-39	1·146
	1946	1·359		1946	1·758
Chile	1935-39	1·164	Norway	1935-39	0·789
	1943	1·175		1945	1·075
Australia	1935-39	0·978	Sweden	1935-39	0·782
	1945	1·244		1945	1·147
New Zealand	1936-39	1·018	Switzerland	1936-39	0·779
	1946	1·473		1946	1·158

The study of fertility in western countries practising birth control is a very speculative one. Much research was carried out by demographers on the subject of population prospects but no single "perfect" measure was devised. The most frequently used guide to future population trends was the net reproduction rate which sets out to show the extent to which one generation of mothers of child-bearing age was reproducing itself. A net reproduction rate of unity indicates that births were occurring at a rate just sufficient to replace the previous generation. Table VI gives the rates in 14 countries before World War II together with the most recent post-war figures available. In all these countries except France recent figures were above unity compared with a deficiency in a large number of countries before the war.

In England and Wales, the effective reproduction rate—which differs from the net reproduction rate in that it allows for the fact that mortality rates will probably continue to decline instead of using a constant mortality—exceeded unity in 1946 for the first time in a generation and was still above unity in 1949.

TABLE VII. EFFECTIVE REPRODUCTION RATES IN ENGLAND AND WALES

Period	E.R.R.	Period	E.R.R.	Period	E.R.R.
1841	1·371	1920-22 average	1·129	1941	0·761
1851	1·401	1923-25 "	0·959	1942	0·853
1861	1·446	1926-28 "	0·873	1943	0·900
1871	1·562	1929-31 "	0·830	1944	0·996
1881	1·576	1932-34 "	0·768	1945	0·909
1891	1·413	1935-37 "	0·775	1946	1·103
1901	1·263	1938	0·808	1947	1·205
1911	1·130	1939	0·808	1948	1·070
1917-19 average	0·874	1940	0·772	1949*	1·02

* Provisional.

Migration. The changes in the population of a country are determined on the one hand by natural increase or decrease (the excess or deficiency of births over deaths) and by the balance of inward and outward migration on the other. At the end of each decade between 1871 and 1931, the United Kingdom had a net loss by migration totalling 3,972,000 persons for these 60 years. But from 1931-39 the United Kingdom gained 507,000 persons and from 1939 to 1948 a further 208,000. In the postwar years 1946 to 1949 alone, however, the trend of the 1930s was reversed and there was a net loss. The numbers of British emigrants from the United Kingdom to some Commonwealth countries in recent years are shown in Table VIII.

TABLE VIII. BRITISH EMIGRANTS FROM THE UNITED KINGDOM BY SEA

	To Canada	To Australia	To New Zealand	To South Africa
1919-21*	88,618	23,090	10,274	10,939
1934-38*	2,568	4,563	1,500	4,995
1946	52,479	9,592	5,428	11,127
1947	22,960	13,012	5,918	26,142
1948	34,487	34,445	6,927	32,232
1949	20,762	53,059	9,261	15,283
1950 (Jan.-June)	7,307	28,620	5,468	4,917

* Annual Average.

Future Population Trends. Estimates of expected changes between 1940 and 1960 in the population of working age in Europe (excluding the U.S.S.R.) were published by the Economic Commission for Europe. Between 1920 and 1940 this population of ages between 15 and 64 years increased from 217·5 millions to 259·5 millions. But low birth rates between the two World Wars and losses of life during World War II changed the trend after 1940. In northern, western and central Europe the working population was expected to show an increase of 4 millions between 1940 and 1960 compared with an increase of 16·5 millions between the two World Wars. On the other hand in eastern Europe (Bulgaria, Czechoslovakia, Hungary, Poland, Rumania and Yugoslavia) the working-age population fell by about 9 millions between 1940 and 1950 and was only expected to have regained 5 millions between 1950 and 1960. It was in southern Europe where a sizeable increase of 5 millions was expected between 1950 and 1960. Altogether the European working population was put at 269·8 millions in 1960 compared with 255·8 millions in 1950. Table IX shows that there was considerable variation between countries in the extent of the increase. In western Europe the Netherlands should relatively gain the most in working population between 1950 and 1960.

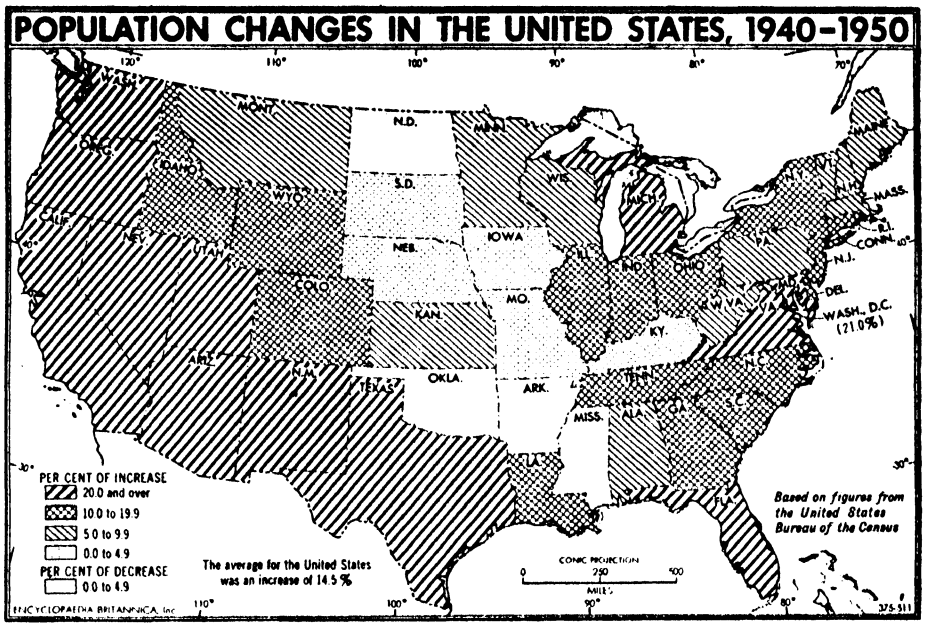


TABLE IX. PROJECTED RATE OF INCREASE IN EUROPE
(Population aged 15 to 64 from 1950 to 1960, in percentages)

Rumania	12·1	Italy	7·5	Norway	2·9
Poland	11·3	Finland	7·3	Switzerland	2·4
Yugoslavia	11·1	Bulgaria	6·8	United Kingdom	0·9
Netherlands	10·7	Denmark	6·7	Austria	0
Portugal	9·8	Germany	6·2	Belgium (decrease)	2·0
Spain	9·4	Hungary	4·3	France (decrease)	2·3
Ireland	8·6	Czechoslovakia	3·8	All Europe	5·5
Greece	7·9	Sweden	3·1		

The 1950 census taken in the United States on April 1 showed a population of 150,697,361. The increase of 19,028,086 from the 1940 count was the largest population rise for any decade in the country's history. The census showed striking changes in the internal distribution of the population with big gains in the west. Most of the growth in population occurred in the lower and upper age groups. Declining marriages and birth rates in the depression of the 1930s had meant that although the total population in the United States was rising, numbers in the age group 20-24 would decline by about a million between 1950 and 1956. Some past and anticipated changes in age groups are shown in Table X.

TABLE X. UNITED STATES TOTAL POPULATION IN AGE GROUPS
(Percentages)

Year	Under 20 years	20-45 years	Over 45 years
1850	52·[illegible]	35·1	12·4
1900	44·4	37·8	17·8
1950	33·0	38·2	28·8
1960 (est.)	32·0	36·3	31·7
1970 ,,	29·7	36·6	33·7
1980 ,,	28·0	36·2	35·8
1990 ,,	26·6	35·2	38·2
2000 ,,	25·7	34·6	39·7

The ageing population of Great Britain was also strikingly evident from the statistics. In 1891, 35% of the population was under 15 years old and 4·8% over 65 years; in 1949 these figures were 22% and 10·8% respectively. It was estimated that by 1977 about 16% of the population would be over 65 years of age. (*See* also MARRIAGE AND DIVORCE.)

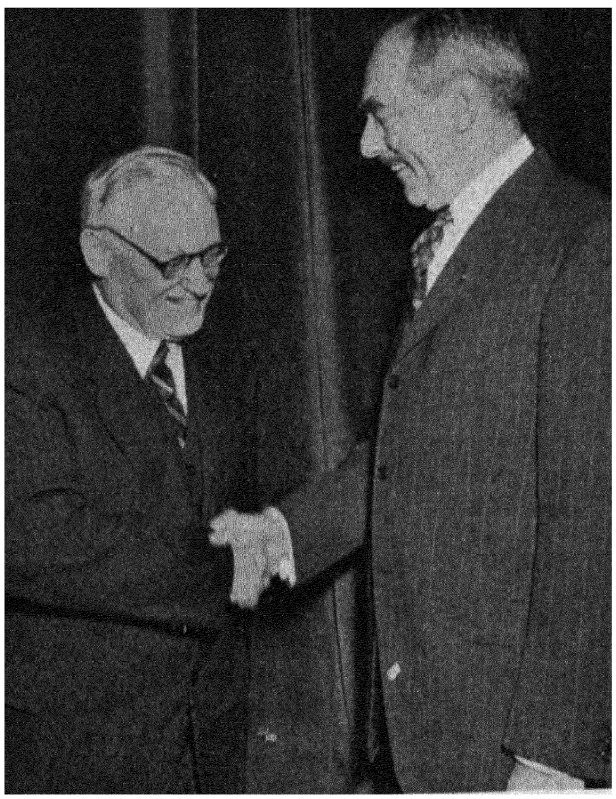
TABLE XI. CHANGES IN AGE GROUPS IN ENGLAND AND WALES AND THE UNITED STATES (1940-50)

Age Group	Actual increase (+) or decrease (—), million E. & W.	U.S.	Percentage change E. & W.	U.S.
Under 10 years	+1·0	+9·0	+17·5	+41·0
10-19 years	—0·6	—2·0	— 9·5	— 8·0
20-39 years	+1·2	+4·0	+10·2	+ 9·0
40-59 years	+1·4	+4·7	+13·6	+16·0
60 and over	+1·1	+4·0	+19·0	+30·0

(E. I. U.)

VITAMINS: *see* FOOD RESEARCH.

VYSHINSKY, ANDREY YANUAREVICH, Soviet politician (b. Odessa, 1883), studied law at the University of Kiev and started his political activity in 1902 by joining the Menshevik wing of the Social Democrats. When the Bolsheviks took power in 1917, he deserted the Mensheviks, served in the Red army for a year and joined the Communist party in 1920. Appointed attorney-general of the Russian Socialist Federal Soviet republic in 1923, he became professor of jurisprudence at Moscow university two years later. He was appointed people's commissar for justice in 1927, All-Union deputy public prosecutor in 1933, and public prosecutor from 1935-39 during the period of the ruthless liquidation of the anti-Stalinist opposition inside the All-Union Communist party. On March 31, 1940, Vyshinsky was appointed deputy chairman of the council of people's commissars and on Sept. 7, 1940, deputy people's commissar of foreign affairs. He brought about the setting up of a Communist government in Latvia in June 1940, the severing of Soviet-Polish diplomatic relations in April 1943, and the setting up of a Communist-controlled government in Rumania in March 1945. Meanwhile, Vyshinsky represented the U.S.S.R. in the Allied Mediterranean commission (1943-45) and from the Potsdam conference onwards attended virtually all the important inter-Allied and United Nations meetings. He was not among the nine deputy chairmen of the council of ministers (the description "people's commissars" being dropped) appointed on March 15, 1946. He remained, however, one of the four deputy ministers of foreign affairs. On March 4, 1949, he succeeded Vyacheslav M. Molotov as



with Dean Acheson, U.S. secretary of state, at the opening of United Nations' fifth general assembly, Sept. 1950.

minister of foreign affairs. He took part as chief Soviet delegate at the 5th general assembly of the U.N. at Flushing Meadow, New York, and on Sept. 20, 1950, submitted a three-point "peace plan" aimed at reducing the present armed forces of the five great powers of the world by one-third.

WAGES AND HOURS. The year 1950 was one of fairly small wage movements in most parts of western Europe, but of growing demands for wage improvements in the interests of the workers receiving the lower rates. The cost of living, according to most of the official index numbers, showed only small, and divergent, movements: in Great Britain there was a very slow upward movement after the devaluation of sterling. It was, however, more and more argued that, with the removal of controls over most goods except essential foods, the official figures were increasingly failing to reflect real costs; and price increases not covered by the official figures, as well as high profits recorded in most countries, were the principal arguments put forward by those who sought higher wages. There was also, side by side with the demand for higher minimum rates for those near the bottom, a growing claim on behalf of the skilled workers that their "differentials" were so reduced as a consequence of flat rate advances during and since the war as seriously to prejudice recruiting for the skilled crafts. This argument applied mainly to skilled time workers: most skilled piece workers were able, where conditions of full employment prevailed (but not in Germany, Italy or Belgium), to earn substantially more than the time rate. There was, however, a large body of skilled time workers to whom this did not apply; and the distance between their rates and those of labourers in the same industries was now small and would be further narrowed if basic minima were increased without corresponding advances to those working at higher rates. The French government, under strong pressure from the trade unions, put forward in June 1950 an amended wage scale giving not very large concessions to the lower-paid workers. This was rejected by the C.G.T. but accepted under protest by the Christian unions and the Socialist Force Ouvrière.

In Great Britain, the policy of wage restraint, hitherto accepted by the Trades Union congress, had been breaking down, and was definitely repudiated by the congress, against the wish of the general council, in Sept. 1950. Compulsory arbitration, however, remained in force and was not yet seriously challenged: to that the congress decision meant in effect that each union became free to formulate such claims as it pleased and to negotiate on them with employers, but that, if negotiations broke down, the matter went to arbitration without official strike action. The trade union movement was strongly pressed from many quarters to adopt a national wages policy—by which was usually meant an attempt to bring wages in different occupations into better accord with degrees of skill and responsibility also, where possible, with the intensity of the need for additional workers—but the movement still refused to accept any such policy, and insisted on the need to preserve the established methods of collective bargaining, trade by trade, without the sanction of any general rules or principles.

The latest figures of average earnings and hours in British manufacturing industries related to April 1950. At that date for the industries covered, average weekly earnings were as follows: men (over 21) 145*s.* 9*d.* youths and boys 61*s.* 5*d.* women (over 18) 80*s.* 6*d.*, girls 51*s.* 10*d.* The average hours worked were, for men 47, for youths and boys 44·2, for women 41·9 and for girls 42·5. The figure for women was reduced on account of a number of married women who worked less than full time. These earnings represented the following percentage increases over those of previous periods (Oct. 1938=100):

TABLE I. PERCENTAGE INCREASES OF EARNINGS IN GREAT BRITAIN

	July 1945	Oct. 1946	Oct. 1947	Oct. 1948	Oct. 1949	April 1950
Men (over 21) . .	76	75	86	100	107	111
Youth and Boys .	74	78	99	125	130	136
Women (over 18) .	94	101	114	129	142	148
Girls . . .	90	109	136	167	179	180

Hours worked showed little change for adult men, as compared either with 1938 or with the years after the end of World War II. In comparison with 1938, the average hours worked by women had fallen from 43·5 to 41·9, for girls from 44·6 to 42·5, and for youths and boys from 46·2 to 44·2. These figures included overtime.

Earnings for men only by industries in April 1950 ranged from 166*s.* in the metal trades to 141*s.* in leather and clothing, 137*s.* in transport (excluding railways) and 117*s.* in government industrial establishments. For women the highest average was 91*s.* in the vehicle trades and the lowest 73*s.* in government establishments. For textiles, the women's average was 83*s.* and for clothing 82*s.* For coal mining, which was not covered by the main return, the average weekly earnings for adult men were 187*s.*, and for regular dock workers 170*s.* No figure was available for railway workers.

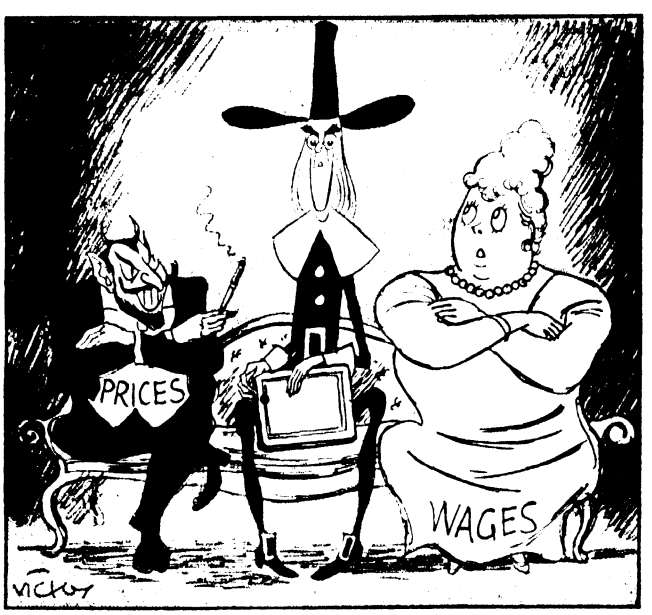
All these figures grouped skilled and less skilled workers together, and referred to earnings and not to rates of wages. The official index figure for wage rates (June 1947=100) was 110 in Aug. 1950. This was the same as for Jan. 1950; but some important changes took place in the autumn, including an increase of the agricultural minimum to £5 a week.

The aggregate national wages bill for 1949 was estimated in the White Paper on national income at £4,280 million, as against £4,050 million in 1948. The corresponding figures for salaries were £2,250 million and £2,140 million. The total national income was put at £11,201 million in 1949 and at £10,703 million in 1948. (G. D. H. C.)

TABLE II. WEEKLY EARNINGS AND HOURS WORKED IN THE UNITED STATES, AUG. 1950, AS COMPARED WITH AUG. 1949

Industry	Average weekly earnings August		Average weekly hours August		Average earnings per hour August	
	1950	1949	1950	1949	1950	1949
All Manufacturing	$60·32	$54·70	41·2	39·1	$1·464	$1·399
Durable goods	64·33	57·89	41·8	39·3	1·539	1·473
Non-durable goods	55·65	51·31	40·5	38·9	1·374	1·319
Iron and Steel	66·38	55·16	41·7	36·3	1·593	1·519
Electrical machinery	60·46	56·73	41·1	39·1	1·471	1·451
Non-electrical machinery	67·65	59·86	42·2	39·1	1·603	1·531
Transportation equipment	72·65	65·90	41·8	39·7	1·738	1·660
Automobiles	75·24	67·78	42·2	39·8	1·783	1·703
Non-ferrous metals	63·07	58·39	40·9	39·4	1·542	1·483
Lumber and wood products	58·46	52·87	42·3	40·7	1·382	1·299
Furniture and fixtures	55·00	49·69	42·8	40·4	1·285	1·230
Stone, clay and glass	59·39	54·17	41·5	39·6	1·431	1·368
Textile-mill products	49·53	44·37	40·6	37·6	1·220	1·180
Apparel, etc.	46·18	41·95	37·7	35·7	1·225	1·175
Leather and leather products	46·45	42·00	39·2	37·2	1·185	1·129
Food and food products	56·41	53·00	42·0	41·7	1·343	1·271
Tobacco manufactures	43·44	38·58	39·6	38·7	1·097	·977
Paper and allied products	62·80	56·26	44·1	41·8	1·424	1·346
Printing and publishing	73·09	70·69	38·9	38·5	1·879	1·836
Chemicals and allied products	63·14	58·77	41·4	40·5	1·525	1·451
Products of coal and petroleum	74·22	72·38	40·8	40·3	1·819	1·796
Rubber products	67·61	57·72	42·6	38·3	1·587	1·507
Miscellaneous manufacturing industries	54·91	48·51	41·6	38·9	1·320	1·247
Non-Manufacturing						
Coal mining						
Anthracite	65·41	42·80	33·1	23·4	1·976	1·829
Bituminous	69·83	49·51	34·9	26·1	2·001	1·897
Metaliferous mining	65·16	58·18	42·2	39·5	1·544	1·473
Street railways and buses	67·24	64·46	44·8	44·7	1·501	1·442
Telephone	54·71	51·57	39·3	38·4	1·392	1·343
Telegraph	63·99	63·64	45·0	45·1	1·422	1·411
Gas and electric utilities	65·97	63·92	41·7	41·4	1·582	1·544
Wholesale trade	60·59	57·10	40·8	40·7	1·485	1·403
Retail trade	42·17	39·58	38·3	37·8	1·101	1·047
Hotels	33·80	32·93	43·9	44·2	·770	·745
Private building	75·74	71·95	37·4	37·2	2·025	1·932

SOURCE: *Monthly Labor Review*, U.S. Bureau of Labor Statistics.



"Between the Devil and the T.U.C." by Vicky in the "News Chronicle" (London) on April 4, 1950.

United States. In Sept. 1950 pay rolls in manufacturing industries reached more than four times the dollar level of 1939 pay rolls. The 1950 figure was 20·4% more than that for Sept. 1949. Manufacturing employment rose 9·1%, while total employers' disbursements, including salaries and wages, for Sept. 1950 were $12,525 million, which was 12·3% more than for the same month in 1949. Real wages continued upwards, reaching a postwar index peak of 145·5 based upon 1939 averages. Average real wages for the first nine months of 1950 surpassed the 1949 figures by 5·9%. In no industry did average weekly earnings or average hourly earnings decline. The average weekly earnings exceeded $50 in 80·6% of the recorded industries. The strengthening of wages was accounted for by an average increase of two hours in the manufacturing work week and by increases in hourly rates of pay.

The highest "take-home pay" was $75·74, in the building construction industry, followed closely by auto workers, who received $75·24. In 1949, the petroleum and coal products industry reflected the highest weekly earnings. The lowest weekly payments were made to hotel employees ($33·80), not including tips, board, room or uniforms.

The greatest increase in weekly earnings occurred in the anthracite coal mining industry (52·8%). Bituminous coal miners were second (41%), followed by iron and steel workers (20·3%). The coal industry increases are attributable principally to a 43% increase over 1949 in hours worked per week. Coal miners still had the shortest work week in 1950, however, and telegraph workers the longest. The telegraph industry also experienced the smallest increase in average weekly earnings in 1950—0·5%. The greatest hourly wage increases occurred in the tobacco industry (10%) and in anthracite coal mining (8%).

Five-year shifts in rates of hourly earnings in selected industries are shown in Table II. The Sept. 1950 average hourly rate for common labour (in road building) was $1·20 compared with $1·17 in 1949 and 47 cents in 1941. Farm wages continued a downward decline to 70 cents an hour (not including board and room) in 1950, as against 74 cents in 1949 and 78 cents in 1948. (*See* also PRICES; WEALTH AND INCOME, DISTRIBUTION OF.) (D. J. H.)

WAKE ISLAND: *see* PACIFIC ISLANDS, U.S.

WALES. Principality forming part of Great Britain. Area (including Monmouthshire): 8,012 sq.mi. Pop. (Dec. 31, 1948, est.): 2,552,000.

In the sixth annual debate on Welsh affairs in the House of Commons the government spokesman gave comparative figures of unemployment in Wales: 238,000 in 1932, 61,000 in 1946, and 33,000 in Oct. 1950. Since 1945 some 450 new manufacturing firms had been introduced into south Wales alone; 93 additional new factories were under construction and 96 approved though not yet licensed to be built. The most difficult problem was that of disabled workers who numbered 64,000 including 10,700 unemployed, largely ex-miners. Much had been done for them in specialized factories but the best hope was in starting new industries. One-tenth of the extra contracts placed under the rearmament programme, added the spokesman, had gone to Wales, and besides there were extra demands for coal and steel.

Welsh members of parliament expressed their dissatisfaction with the allocation of only one day annually for debating Welsh problems and there were indications that the government was sympathetic. It seemed likely that another day would be set aside in 1951 for debating the first report of the Council for Wales, an advisory body appointed by the government which had specially called attention to the

seriousness of rural depopulation in its report and called for wider powers to investigate that problem.

The plans of the National Coal board were calculated both to secure greater coal output and to increase employment. It was revealed that £97 million would be spent on colliery developments in Wales during the period 1950 to 1965. In south Wales this would provide seven new pits on the most modern lines while 26 others would be reconstructed. In north Wales eight collieries would be modernized. Output in the southwestern region of the National Coal board which consisted chiefly of south Wales pits was disappointing. The total yield of just over 23 million tons was half-a-million tons higher than in 1949 but fell short of the target set for the division. Increased mechanization brought higher output in some districts but the loss of more than 4,600 miners through death, sickness, accident, old age and migration to other industries was a serious drag on production. The problem of manpower for the coal mines became one of the most anxious problems of Wales.

New hope was given to miners and other workers suffering from dust disease by the opening of laboratories and also by a rehabilitation centre at Cardiff's largest hospital where doctors and scientists sponsored by the Medical Research council had been achieving striking results under the leadership of Dr. Charles Fletcher since 1945. One of the features of the preventive work of the unit was a mass X-ray examination of 30,000 people of the Lesser Rhondda valley.

The steel strip mill at Margam, Port Talbot, largest and most up-to-date of its kind in Europe, was reported at the end of the year to be nearing the production stage. South Wales continued to contribute its proper share of the new steel production records achieved. By the end of the year its average weekly production of pig iron was at an annual rate of 1,281,000 tons, an increase of 1,600 tons a week; its average weekly production of steel ingots and castings was at the annual rate of 3,437,200 tons, an increase of 2,560 tons a week, compared with the previous year. An interesting feature of Wales's new industries was the progress of toy-making with 3,000 workers recruited into the industry in four years and profitable markets secured all over the world. Another new industry which had made remarkable headway was that of watch and clock manufacture with a production for the home market of 16,000 watches and 6,000 clocks weekly.

The draft outline plan of a new town at Cwmbran (Monmouthshire) was released for public scrutiny and comment. The existing population of the area would be increased to 35,000 and to house the additional 22,000 and redevelop derelict districts would require 6,300 new houses. Because of danger to subsidence through mining operations the minister of town and country planning abandoned the scheme for another new town at Church village, in mid-Glamorgan.

The forestry commissioners reported that 8,783 ac. were newly planted during 1949. The programme for Wales for 50 years from 1945 was 800,000 ac. with seven-eighths of the total new planting. There was opposition to the proposed afforestation of the Upper Towy valley involving 46 farms of about 20,000 ac. An inquiry into objections was adjourned, owing to legal argument, to enable the minister of agriculture to decide whether the forestry commissioners were bound to give evidence as demanded by the objectors to the scheme.

Survey work began on the Cardiganshire section of the north Wales hydro-electricity scheme which was estimated to cost £20 million and to take 21 years to complete. Vigorous protests continued against the Snowdon national park sections of the scheme.

A national conference described as non-party held at Llandrindod convened by the New Wales union decided to organize a petition for a Welsh parliament. The Conservative and Labour parties were not officially represented but Liberals, Welsh Nationalists and Communists supported the campaign. Welsh members of parliament who gave evidence before the committee of inquiry, under Lord Beveridge, into the future of broadcasting urged that when the present charter of the B.B.C. terminated in 1951 Wales should be given an independent broadcasting corporation.

Conducted almost entirely in the Welsh language the National Eisteddfod at Caerphilly attracted some 100,000 people and made a profit despite £36,000 costs. Defeating Ireland at Belfast by 6 points to 3, Wales won the Rugby football " triple crown " for the first time in 39 years.

(J. C. G. J.)

WAR PENSIONS. Great Britain. During the financial year 1949-50, 20,776 new awards of disablement pensions were granted. Deaths among pensioners during the year numbered 14,600 (10,328 of World War I), and after allowing for pensions discontinued the number in payment at March 31, 1950, was 724,563, compared with 738,343 a year earlier. The number of World War I and earlier wars pensions in payment was 325,639, compared with 334,881 by March 31, 1949. The average age of World War I pensioners was over 60. Including the 190,846 widows (102,885 of World War I) and 132,014 dependants (78,088 of World War I), the total number of pensioners on March 31, 1950, was 1,047,423, as compared with 1,078,469 in the previous year. A more detailed analysis by degree of disablement for ex-servicemen, including mercantile marine personnel, civil defence workers and civilians wounded in war operations, is given in the table.

DISABLEMENT PENSIONS IN GREAT BRITAIN IN PAYMENT ON MARCH 31, 1950

Disablement	World War I	World War II	Total
100%	20,379	33,627	54,006
90%	2,747	1,064	3,811
80%	11,556	10,330	21,886
70%	16,546	11,436	27,982
60%	25,399	15,987	41,386
50%	39,984	23,065	63,049
40%	39,858	39,694	79,522
30%	63,560	85,004	148,564
20%	95,684	145,002	240,686
Less than 20%	9,926	33,715	43,641
Total	325,639*	398,924	724,563

* On March 31, 1950, there were 2,626 pensions of earlier wars, mainly of the South African war.

The total expenditure of the Ministry of Pensions in the financial year 1949-50 was approximately £88,175,000 (2·6% of the total expenditure), bringing the total cost of war pensions since Aug. 4, 1914, to over £2,019 million. Expenditure in 1949-50 was some £1·7 million less than in the previous year. Most of the reduction was in the cost of medical treatment, and this was due to the free provision under the National Health act of certain services formerly paid for by the ministry.

The basic pension for a totally disabled ex-serviceman remained at 45*s.* a week, only 5*s.* more than in 1919; but the Ministry of Pensions, avoiding an all-round increase, was making special allowances where they were really needed. By this policy was explained the increase in expenditure on pensions and allowances from £78·7 million to £80·7 million between March 31, 1947, and March 31, 1950, although the number of pensioners had decreased during the period from 1,136,128 to 1,047,423.

Europe. *France.* Louis Jacquinot, minister of ex-servicemen and war disabled, revealed at the end of the year the number of French losses in killed during World War II. The total of members of the services killed was 210,671, divided as follows: campaign 1939-40, 91,232; campaign 1940-45

60,343; prisoners of war dead in captivity, 36,877; forces of the interior, 22,219. The number of civilians killed in war operations amounted to 107,874, including 6,450 foreigners.

A law promulgated on Aug. 8, 1950, increased war pensions in three stages during the year: compared with its amount on Dec. 31, 1949, a pension was increased by 9·5% from Jan. 1, 1950, by 25% from July 1 and by 35% from Dec. 25. These increases, however, did not restore the relation which existed before World War II between pensions and prices. The ex-serviceman's gratuity (*retraite du combattant*) remained fixed at the 1930 base of Fr. 525 per annum from the age of 50 and at Fr. 1,260 per annum from the age of 55, but was increased to Fr. 2,400 to all over 60. In the 1951 budget estimates the only readjustment of war pensions planned was an increase of 12% as from Dec. 25, 1951. A total of Fr. 40,304 million (1·5% of the total ordinary expenditure) was earmarked for an approximate total of 1,170,000 war pensioners, including 885,000 disabled of World War I.

Germany. In the budget of Western Germany for the financial year 1950-51 a sum of DM. 3,680 million was allocated for war pensions and ex-servicemen's benefits (28% of the total expenditure). The number of World War II disabled in Western Germany was estimated at 1·4 million, including 54% with 50% or more disablement, 1,260,000 dependants and 626,000 widows. Including the disabled of World War I, there were in all about 3·9 million war pensioners in Western Germany.

Yugoslavia. There were about 328,000 war-disabled men and women. The totally disabled received a monthly pension of 3,000 dinars and those classed as 20% disabled, 400 dinars. Special re-education courses and schools for the war-disabled functioned under the management of the Union of Disabled Ex-Servicemen of Yugoslavia (Savez Ratnih Vojnih Invalida Jugoslavije) presided over by Lieut. General Miloje Milojević.

United States. In the budget estimates for 1951-52 a total of $4,911 million (6·8% of the total expenditure) was earmarked for veterans' services and benefits. In the fiscal year 1950-51 about $5,746 million (12·2%) was spent and in 1949-50 the cost of veterans' services was $6,627 million (14%). By Nov. 1, 1950, living U.S. veterans of all wars numbered 19 million, including 15,336,000 of World War II.

Wartime rates of compensation for service-connected disabilities ranged from $15 to $150 a month, depending on the degree of disability, plus statutory awards for certain disabilities which might bring total payments to a maximum of $360 a month. Peacetime rates were 80% of these figures. The monthly rate for pensions—paid to veterans of either World War who become permanently and totally disabled for reasons not traceable to service—was $60, which was increased to $72 after 10 years or when the veteran reached age 65. On Nov. 1, 1950, a total of 2,358,213 disabled veterans of all wars were on Veterans' Administration compensation and pension rolls. At the same time, 1,004,720 dependants of deceased veterans were drawing death compensation and pension payments. Living veterans on V.A. rolls on Nov. 1, 1950, included: Civil War 13; Indian wars 442; Spanish-American War 89,908; World War I 538,779; regular establishment 55,439; World War II 1,637,626.

WAR PRISONERS: *see* PRISONERS OF WAR.

WATER SUPPLY. The deficiency in rainfall during the summer of 1949 in Great Britain was largely made good by the heavy rains at the end of the year; and the very high rainfall over most of the country in Feb. 1950 made an adequate and continuous supply generally possible throughout the summer. Difficulties, where they were experienced, were chiefly due to the insufficiency of the distribution system or to the additional demand brought about by the introduction of new industries and by the increase of population. Many large cities in England continued improving their undertakings: for example, Manchester went on with the construction of tunnels (*q.v.*) for carrying pipelines from Haweswater; Liverpool laid further lengths of the fourth pipeline to convey water to the city from Vyrnwy, a distance of 80 mi.; and Birmingham proceeded with the laying of a steel main 60 in. in diameter forming part of the Elan aqueduct, some 36½ mi. long. Dundee placed contracts for 16 mi. of 40-in. steel pipeline, and Swansea progressed with their new Usk reservoir, designed to hold 2,500 million gal. Birkenhead, Leeds, the Tees valley and large industrial users in Cheshire also initiated new schemes.

The long-awaited report of the Water Softening subcommittee of the Central Advisory Water committee, published for the Ministry of Health by H.M. Stationery Office, dealt with the desirability and practicability of softening public water supplies in hard-water areas. The committee considered the cause of hardness, its determination and modern methods of softening; the alleged disadvantages of hard and soft waters; the method of overcoming the disadvantages of hard water; the use of water in industry; and the recognized softening processes and their costs. Central softening of water to the extent of 200 p.p.m. of hardness was estimated to cost between 3*d.* and 4*d.* a thousand gallons, which for a daily consumption of 30 gallons a head is equivalent to 4*s.* a head per annum. The committee's conclusions were that hard water should be softened where the cost was reasonable but that there were more urgent matters involving the use of labour and materials which should have prior attention.

The year 1950 saw the publication of the *Manual of British Water Supply Practice* by the Institution of Water Engineers; the preparation of it had engaged more than 100 leading British water engineers and other specialists for two years. It dealt authoritatively with water supply and waterworks design as practised in Great Britain and referred also to practice and research in other parts of the world wherever comparison was useful.

Notable treatment-plants carried out during the year included the Ashford Common filtration-works of the Metropolitan Water board designed to deal with 90 million gal. of water daily from Queen Mary reservoir: the filters were of the slow-sand type, and microscreens were used instead of primary filters. The first fully automatic gravity-type purification-plant was put into commission for the Ministry of Supply for treating crude river-water for general domestic and works purposes, including pre-chlorination, coagulation, flushing, mixing, clarification in sedimentation tanks, gravity filters, post-chlorination and finally de-chlorination. The automatic control system covered de-sludging of the sedimentation tanks in addition to the operation of the filters, and the only maintenance required was the re-charging of chemical tanks, the replacing of empty gas cylinders and general cleaning.

Further surveys of the water supply in various parts of the country were published by the Ministry of Health to facilitate decisions on future policy. Amongst the areas considered was Yorkshire (West Riding), where it was suggested that 10 single authorities should be constituted in place of the 94 statutory undertakers. In Cheshire and Lancashire 15 new authorities were recommended to replace the 95 suppliers; in the case of Derbyshire and southern Nottinghamshire, where there were 40 separate undertakers, and in the south-western and northeastern development areas, where there were 51 and 38 water undertakers respectively, substantial reductions were recommended. The government in 1950 did not announce any action towards nationalizing water supplies.

The Inland Water Survey committee, whose work was

interrupted by World War II, was re-constituted during the year. The object of the survey was to make information available about the yield, behaviour and quality of the water reserves of Great Britain.

Commonwealth. In South Africa it was decided to collect statistics and data on the flow of all the Union's rivers and on floods, rainfall and evaporation, so as to provide a plan for conserving water. Capetown brought into commission the third Steenbras pipeline, capable of delivering an additional 10 million gal. a day; but it was urgent to begin work on the new Wemmers Hock dam without delay.

The Hunyani Poort dam, 20 mi. from Salisbury, Southern Rhodesia, 120 ft. in height, was commenced during 1950; and consideration was given to a scheme for supplying the goldfields of the Orange Free State with up to 50 million gal. a day, average rainfall over the catchment area being only 18 in.

On the grounds of economy a new site was chosen for the Warragamba dam for Sydney and other towns on the south coast of New South Wales, which would provide a reservoir with an additional storage of 460,000 million gal. at an estimated cost of £9 million. Work was begun on a new reservoir in the Upper Yarra catchment area for Melbourne, to have a capacity of 30,000 million gal.: the dam was to be of rolled earth and rock fill, reaching a height of 260 ft. above ground and was estimated to cost £7,800,000; the scheme also included two pipelines 68 in. in diameter and 23 mi. long, with a delivery capacity of 750 million gal. a day.

(J. KD.)

United States. On Jan. 3, 1950, the president, Harry S. Truman, appointed a seven-member commission to investigate facts and policies with respect to the present utilization and further development of the water resources of the U.S. and to recommend desirable legislation or changes therein. The report covered generally problems in connection with water resources management and land reclamation. Insofar as the recommendations related to public utilities, properly so called, the report recommended that federal agencies use the river basin approach of co-ordinating public utility functions with other functions, procedures most commonly associated with the Tennessee Valley authority. What was perhaps most significant from the point of view of the privately owned segment of the power industry was the recommendation: "No licensing of private power projects which interfere with the full accomplishment of comprehensive multiple purpose development of river basins, including marketing of the power incident to such programmes . . . should be permitted." On the other hand, water supply for municipal purposes "should continue to be primarily a local responsibility, including inter-community co-operation through the formation of metropolitan water districts to make possible area-wide co-ordination of water supply sources to meet the needs of an increasing population." Moreover, water supply, like power supply, should constitute a "fully reimbursable service" of multiple purpose projects. The most problematical and far-reaching suggestion of the committee was that waterways should be fully developed and integrated with all other forms of transport into a fully reimbursable segment as to cost. (M. G. G.)

WEALTH AND INCOME, DISTRIBUTION OF. United Kingdom.

The White Paper on national income published in 1950 gave the distribution of incomes for 1948. The official estimates had to be supplemented by an estimate in the number of incomes in the lowest income category, which was made with reference to the estimated total number of income recipients. As in previous years, details were still insufficient for the lowest group, which comprised one-half of the income recipients.

TABLE I. DISTRIBUTION OF INCOMES IN THE UNITED KINGDOM, 1948

Range of incomes (in £)	Number of incomes (in thousands)	Amount of income before tax (in £ million)	Amount of income after income-tax and surtax (in £ million)
Under 250	(12,000)*	2,439	2,411
250-500	8,650	2,929	2,770
500-1,000	2,295	1,519	1,296
1,000-2,000	545	730	543
2,000-10,000	209	729	415
10,000 and over	11	195	47
Total	(23,710)*	7,541	7,482
Unallocated private income†		2,531	1,788
	Total	10,072	9,270

* Figures in brackets are private estimates. † Including undistributed profits, interest on savings certificates, dividends of co-operative societies, income in kind, income of non-profitmaking bodies, etc.

SOURCE: *National Income and Expenditure of the United Kingdom, 1946 to 1949* (Cmd. 7933, H.M.S.O., London).

The tendency already discernible in previous years, a shift from the lower to higher income groups, continued. The number of incomes under £250 decreased in comparison with 1947 by 1 million, and there was a corresponding increase spread over all the higher groups (it was particularly noticeable in the middle ranges of income). The distribution of incomes after taxes on income showed little change compared with the previous year. The rate of income taxes was negligible on incomes below £500 but rose to about 80% on incomes over £10,000. The distribution of incomes was further modified by indirect taxes which, on the whole, fell more heavily on the lower income groups. Compared with 1947, the total of indirect taxes on consumption rose, but this rise was partly offset by a rise in subsidies. Tax liabilities as a percentage of personal income, including direct and indirect taxes but deducting subsidies, rose in 1948 to a postwar peak of 28% but afterwards fell a little. (T. BAR.)

United States. The *Survey of Consumer Finances* in the United States, published by the board of governors of the Federal Reserve System in 1950, supplied information on the distribution of income in 1949 and liquid assets in early 1950. Four previous surveys had made similar information available for the period 1945-48. The surveys were based on small field canvasses of consumer spending units, defined as all persons living in the same dwelling and related by blood, marriage or adoption who pooled their incomes for their chief items of expense.

Survey data on the percentage distribution of spending units according to size of holdings of liquid assets—U.S. government bonds, savings accounts and checking accounts—are provided in Table II. The 1950 data showed a continuation of the principal trends shown in previous years. The average liquid asset holdings of spending units declined further and were only a little more than half their 1947 level. Furthermore, there was a continued increase in the percentage of spending

TABLE II. DISTRIBUTION OF SPENDING UNITS BY SIZE OF LIQUID ASSET HOLDINGS

Amounts of liquid assets held*	1946	1947	1948	1949	1950
None	24%	24%	27%	29%	31%
$1-$199	15	14	15	16	16
$200-$499	14	12	13	13	11
$500-$999	14	14	12	11	10
$1,000-$1,999	14	14	12	11	10
$2,000-$2,999	7	7	6	5	13
$3,000-$4,999	6	7	6	7	
$5,000-$9,999	4	5	5	5	6
$10,000 and over	2	3	4	3	3
Median holdings of all units	$400	$470	$350	$300	$250
Median holdings of those with assets	$750	$890	$820	$790	$810

* Includes all types of U.S. Government bonds, checking accounts and savings accounts in banks, postal savings and shares in savings and loan associations and credit unions. Excludes currency holdings.

SOURCE: Board of governors of the Federal Reserve System.

units having no liquid assets. About 16 million spending units, or 31% of the total, were in this category in early 1950. On the other hand, it should be noted that the average asset holdings of all the groups with assets increased in 1950 for the first time since 1947.

Table III summarizes data provided by the surveys on the distributions of spending units and total money income according to size of income. The postwar expansion of total money income resulted in a shifting of many consumers to higher income levels. This shifting pervaded the entire income distribution.

TABLE III. DISTRIBUTION OF SPENDING UNITS AND MONEY INCOME RECEIVED, BY INCOME GROUPS

Annual income (money income before taxes)	1945		1946		1948		1949	
	Spending units	Total money income	Spending units	Total money income	Spending units	Total money income	Spending units	Total money income
Under $1,000	20%	5%	17%	3%	12%	2%	14%	2%
$1,000-$1,999	27	16	23	12	18	8	19	9
$2,000-$2,999	23	23	25	21	23	16	21	16
$3,000-$3,999	15	20	17	20	20	20	19	19
$4,000-$4,999	7	12	8	13	12	15	11	15
$5,000-$7,499	5	11	6	11	10	17	11	19
$7,500 and over	3	13	4	20	5	22	5	20

SOURCE: Board of governors of the Federal Reserve System.

A longer-term comparison of changes in the distribution of income is afforded by Table IV. This shows for two prewar years and the full-employment year 1948 the percentage of money income going to each fifth of the total number of families and single persons, ranging from those with the lowest incomes to those with the highest. From 1935-36 to 1948 there was a redistribution of income in the United States away from the highest income bracket. The second, third and fourth income brackets significantly improved their relative positions, whereas the percentage of total money income received by the highest bracket declined from 53 to 47.

TABLE IV. PERCENTAGE OF MONEY RECEIVED BY EACH FIFTH OF FAMILIES AND SINGLE PERSONS

Families and single persons ranked from lowest to highest income	1935-36	1941	1948
Lowest fifth	4·0%	3·5%	4·2%
Second fifth	8·7	9·1	10·5
Third fifth	13·6	15·3	16·1
Fourth fifth	20·5	22·5	22·3
Highest fifth	53·2	49·6	46·9

SOURCE: Council of Economic Advisers, based on survey data from National Resource Planning Board (1935-36), Department of Labor (1941) and Bureau of the Census, Department of Commerce (1948).

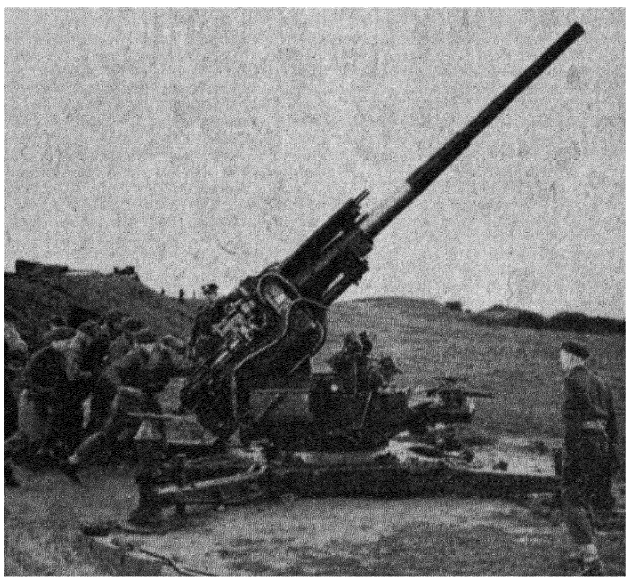
In 1949, the latest year for which Department of Commerce estimates of state income payments were available in 1950, the moderate downward adjustment in economic activity was reflected in a 2% decline in aggregate individual incomes—from $202,385 million to $197,531 million. Per capita income payments (total income divided by total population) were $1,330 in 1949 for the nation as a whole, 4% less than in the previous year. (*See* also BUDGET, NATIONAL; NATIONAL INCOME; PRICES; TAXATION.) (M. GT.)

WEATHER: *see* METEOROLOGY.

WEBB, MAURICE, British journalist and politician (b. Lancaster, Sept. 26, 1904), became Labour agent at Skipton, Yorkshire, at the age of 22. In 1929 he went to London to become the first propaganda officer of the Labour party, a post which he held until 1935, when he joined the *Daily Herald*, at first a liaison officer between that newspaper and Labour party headquarters then as political correspondent. In 1944-45 he was on the staff of the *Sunday Express*. He also broadcast regularly. In 1945 he was elected Labour M.P. for Central Bradford and from 1946 to 1949 was chairman of the Parliamentary Labour party. In the general election of Feb. 1950 he was again returned for Central Bradford and was afterwards appointed minister of food in the Labour government. In March he was sworn of the Privy Council. In July he visited Denmark and the Netherlands. In 1943 Webb published *Britain's Industrial Front*.

WEEKES, EVERTON DE COURCY, West Indian professional cricketer (b. Barbados, Feb. 26, 1925), was first noticed by E. L. G. Hoad, former West Indies test batsman. Weekes played for Barbados and in all four test matches against England in the West Indies in 1947-48, making 141 in the last at Kingston. As he followed this with four consecutive centuries in the first three test matches of the West Indies' tour in India in 1948-49, he set up a new world record of five consecutive centuries in test matches. On that tour he scored 1,350 runs for an average of 90; in test matches, 779 runs for an average of 111·28. In the summer of 1949, playing for Bacup in the Lancashire league, he broke league records by scoring 1,470 runs and playing an innings of 195. In the West Indies' tour in England in 1950 Weekes played in all four test matches, and his batting contributed greatly to his side's success. He scored 338 runs for an average of 56·33, including one century—129 in the third test match at Nottingham. For the tour as a whole he headed the West Indies batting averages, with a total of 2,310 runs for an average of 79·65, his highest innings being 304 not out. Weekes is a compact, dashing batsman and a brilliant fielder in the slips or at cover point. He can also bowl.

WESTERN UNION, the defensive, economic and cultural association formed by Belgium, France, Great Britain, Luxembourg and the Netherlands under the Treaty of Brussels, signed on March 17, 1948. The union merged its military organization on Dec. 20, 1950, into the North Atlantic Treaty organization by decision of its consultative council of ministers. It thereby lost, for the time being, what had originally been regarded as its chief function. The ministers reaffirmed, however, their obligations under the treaty—it was concluded for 50 years, while any of the parties to the North Atlantic treaty could withdraw after 20 years. The ministers also decided to continue close



A detachment of the Royal Netherlands Army carrying out gunnery practice in Norfolk in Jan. 1950 as part of the defence training of the armed forces of the Western Union countries.

co-operation, in particular in the political and cultural fields.

Before its suspension as an independent body, the military organization of Western Union had done valuable preparatory work for the North Atlantic command in Europe by experimenting successfully in international staff work, unifying training methods and signal systems within its orbit and establishing a command structure at Fontainebleau under Field Marshal Lord Montgomery which lay ready to hand for the North Atlantic supreme commander. In 1950, it held combined naval exercises of British, French and Dutch aircraft carriers, cruisers and destroyers under Dutch command in the Bay of Biscay during May 22-27, further joint naval and air exercises, including convoy defence, between June 26 and July 13, and a combined air exercise over western Europe (Operation Cupola) during Aug. 25-27, in which 450 Belgian, British, Dutch and French aircraft as well as some U.S. heavy bombers took part.

In the social and cultural fields, the Western Union members signed on April 17, 1950, conventions making it easier for students belonging to any one of them to obtain part-time work during their studies in the territories of other member countries and regulating pay and conditions for workers moving from one country to another as well as a supplementary agreement on reciprocity in social and medical assistance, additional to the convention on the subject signed in Nov. 1949. On May 15, the Western Union cultural committee introduced a cultural identity card facilitating travel and access to cultural institutions for students and research workers of each of the five countries.

(S. HR.)

WHEAT. World production of wheat in 1950 was more than it had been in 1949, though it was less than in 1948; but its distribution was altered. Larger acreages than in 1949 were sown to wheat in Western Germany, Great Britain, Greece, Poland, Sweden and Yugoslavia. A very considerable reduction, however, took place in the area sown to wheat in the U.S. as a result of the acreage control programme, and a less drastic reduction also occurred in Canada. Increased acreages were sown to wheat in India and Turkey and by the 1949 sowings in Argentina, Brazil and South Africa.

The conditions for the 1949 autumn sowing in the northern hemisphere were usually good and dense stands were soon obtained, these sometimes developing so quickly as to deplete the available soil moisture. Winter rain was generally adequate though more would have been better in Germany and parts of Scandinavia. In spite of some severe frosts after the mild weather that lasted until the middle of Jan. 1950, little damage to the crop occurred. Weather for spring sowing was also satisfactory. Climatic conditions later in the year were generally favourable, except in Switzerland where localized damage was caused by storms and in Yugoslavia where drought seriously cut yields. Increases in the yield of wheat in such countries as Poland and Greece were probably due in part to heavier applications of fertilizers and greater mechanization. In Asia, wheat yields were generally up to standard, though damage from heavy rain and flooding occurred in China and India. The wheat crop in Turkey was well over the very poor crop of 1949.

In the southern hemisphere, winter wheat sowings in Argentina, Australia, Chile and New Zealand suffered in many places from the prolonged drought which preceded the heavy rains that fell towards the end of 1949. Though these rains made good some of the earlier adverse effect of the drought, they also did considerable damage. In New Zealand, frost damage was more severe than usual and in combination with the drought reduced yields particularly on the lighter soils.

WHEAT PRODUCTION, 1949 AND 1950

Countries	Area (thousand hectares) 1949	Area (thousand hectares) 1950 est.	Production (thousand metric tons) 1949	Production (thousand metric tons) 1950 est.
France	4,223	4,272	8,082	7,332
Italy	4,723	4,715	7,020	7,564
Poland	1,445	1,595	1,781	1,990
Spain	3,970	4,200	2,580	3,800
United Kingdom	794	1,002	2,239	2,558
Western Germany	922	1,013	2,471	2,614
Yugoslavia	1,785	1,782	2,516	1,825
Other European*	4,025	4,217	7,128	7,014
Canada	11,145	10,935	9,999	12,566
Mexico	530	600	451	550
United States	31,060	24,488	31,202	27,490
Argentina	4,860	5,060	5,170	5,720
Other South American	2,229	2,291	2,291	1,987
China	21,300		22,600	
India	8,763	9,378	5,685	6,208
Pakistan	4,380	4,336	4,169	4,080
Persia			2,000	1,980
Turkey	4,011	4,600	2,557	4,760
Other Asian*	4,600	5,000	4,300	4,500
North Africa	3,960	4,100	3,283	3,300
South Africa	1,018	1,133	483	372
Australia	5,092	5,053	5,190	5,909
New Zealand	59	53	163	128

Figures are based on F.A.O. *Monthly Bulletin*. Southern hemisphere figures for estimates relate to the 1949-50 crop.

* Figures for Bulgaria, Hungary, Rumania and the U.S.S.R. not available.

Although part of the increased yield in several countries was caused by the more liberal use of fertilizers, some of it was due to the introduction of new varieties. Particularly large yield increases following the distribution of new locally bred varieties were reported, for instance, from Greece. In Finland and Norway, recently developed wheat varieties were tried out in the attempt to extend the cultivation of wheat further north. Improved varieties adapted to local conditions were tried out also in the Portuguese colonies in Africa. The most intensive work on the production of wheat varieties resistant to pests and diseases continued to be done in North America. New races of the Hessian fly able to attack varieties resistant to the older races of the pest became widespread in 1950. New varieties were developed to meet this situation, and genetic factors conditioning resistance to this pest were bred into several standard varieties. Resistance to leaf rust in North America also showed signs of breaking down because of the build-up of new races of the fungus. New sources of resistance were obtained, especially from South America, which were crossed with high-yielding standard varieties to obtain new resistant forms.

Little news was forthcoming on perennial wheat in 1950, except for favourable reports on the forage potentialities of *Triticum* x *Agropyron* hybrids from Canada and Italy. In the U.S.S.R., N. V. Tsitsin's work on perennial wheat had been stigmatized as theoretically unsound, and comparatively little further interest appeared to have been taken in it. Much more interest was displayed in hybrids between wheat and rye. These were tried out in several countries, especially the Netherlands. They yielded well and displayed a considerable degree of hardiness. (*See* also BREAD AND BAKERY PRODUCTS.)

(R. H. RI.)

WILD LIFE CONSERVATION. The International Union for the Protection of Nature held their second general assembly from Oct. 18 to Oct. 25, 1950, in Brussels. In order to avoid the confusion that would arise in Great Britain if all the bodies there engaged in nature conservation were to seek direct membership of the international union, a

British co-ordinating committee was set up to act as intermediary between all its members and the union.

Great Britain and Europe. In Great Britain the Nature Conservancy set up by Royal charter in 1949 was engaged in organization, administrative matters and many urgent cases in which scientific interests were involved. A small research staff based on the two headquarters in London and Edinburgh began work. Active negotiations were started in connection with a number of proposed national nature reserves in England, Wales and Scotland; in some of these informal understandings were reached with the owners.

The National Parks and Access to the Countryside act, passed at the end of 1949, laid upon the Nature Conservancy, among other duties, that of notifying local planning authorities of any land (other than nature reserves) within their areas that had special biological, physiographical or geological interest. A preliminary scientific survey of Great Britain was begun for the purpose of listing, evaluating and delimiting these " sites of special scientific importance." Grants were made in aid of ecological researches and maintenance allowances awarded for the postgraduate research training of suitable students at universities.

The name of the Society for the Preservation of the Fauna of the Empire was changed to the Fauna Preservation society, with enlarged scope. The first number of *Oryx*, the new journal of this society, appeared. The efforts of the Royal Society for the Protection of Birds to re-establish the avocet in England by the protection of its breeding places were markedly successful.

In Italy steps were started by the Movimento Italiano Protezione della Natura to protect the few remaining wild brown bears and to arouse the people to the need for nature protection generally.

Commonwealth. In India attempts were made to call a halt to the destruction of wild life caused by the political changes and upheaval of recent years. The Bombay Natural History society, deeply troubled by the dwindling of wild animals, advised the Bombay state government upon a new Wild Animals Protection act. A census of the only remaining Asiatic lions, carried out in Kathiawar, showed a total of at least 220 and indicated that these animals were not decreasing. The animals in the greatest danger of extinction in the whole of Asia being the three species of Asiatic rhinoceros, steps were taken to continue the protection of the Great Indian rhinoceros in Nepal and in the Kasiranga reserve in Assam. Little information was obtained of the other two Asiatic rhinoceroses.

The government of Ceylon established a Wild Life department with provision for staff, for improvements in nature reserves and for the acquisition of private land in the Katagamuwa sanctuary.

It was perhaps in Africa that the increase of human population and the spread of agriculture most threatened wild places, and it was generally realized that the only hope of the preserving even a remnant of the vast herds of antelopes which had once roamed the plains lay in the provision of large national parks. In Kenya four national parks and four national reserves of faunal importance were established. In Tanganyika the boundaries of the Serengeti national park were agreed upon, to provide sanctuary for the largest remaining assemblage of African wild animals. The game laws of Tanganyika were revised and many significant changes made to the advantage of wild nature. The government of Nyasaland considered how best it could reconcile wild life protection with a congested human population. The guarding of existing reserves and the possibility of establishing a new reserve in the Mjeti Hill area were reviewed.

In Northern Rhodesia the Kafue national park was proclaimed, covering more than 8,000 sq.mi. of country, from the comparatively dry sandy lands of the south to the big rivers, swamps and heavy timber of the northern section, with the magnificent Kafue river dominating the central portion and adding scenic beauty to the attraction of wild life. Southern Rhodesia started to establish a National Parks department, but the policy of game slaughter in tsetse fly control operations was continued.

Strenuous efforts were made by the Wild Life Protection Society of South Africa to save their indigenous animals from over-exploitation. In particular in February the exportation of all kinds of land tortoises from the Cape province was prohibited by proclamation. The status of the Cape mountain zebra also received particular attention: the total number still surviving was estimated to be less than 100.

Australia faced a special task in the protection of its wild life: not only the acts of man but also the ravages of his imported animals, the rabbit, the cat and the fox, had to be counteracted. In New South Wales a Fauna Protection panel was set up to administer the Fauna Protection act, to educate the people in appreciation of animal life and to manage the faunal reserves. Immediate steps were taken for the preservation of the koala.

New Zealand made special efforts to preserve her unique native birds, particularly the recently rediscovered takahe or notornis, the kakapo or owl parrot and the brown duck or red teal. (C. L. Be.)

The Canadian federal government introduced regulations to preserve seals as a food supply for Eskimos and caribou for Indians. The Fisheries Research board undertook tattooing of Hudson bay belugas (porpoise) to learn the extent and direction of migrations; management of trout streams in Prince Edward Island to produce larger fish; and clearance of 150 streams in British Columbia to increase salmon. Provincial developments included: Saskatchewan declared war upon timber wolves, tagged trout in Lac la Ronge, stocked an additional 12 streams with eastern brook trout and opened 13 new game preserves; Ontario commenced air patrol of game fishing in the St. Lawrence river, placed 250 million whitefish fry in Ontario commercial waters, opened a guiding school and made sportsmen responsible for using licensed guides, introduced wild turkeys from Pennsylvania, legalized night coon hunting with dogs and initiated special grouse studies; Quebec restricted moose hunting and made Canada's first confiscation of an aircraft used for illegal fishing; New Brunswick continued moose protection, announced that one million deer had been killed in the 1900-50 period and that annual kills of 20,000 could be maintained, legalized barbed hooks for salmon and reported the return of the brant in large numbers; Nova Scotia declared that the annual kill of 1·5 deer per sq.mi. (about 30,000 per year) was inadequate to prevent overgrazing and urged tourists to hunt. (C. Cy.)

United States. Approximately one out of every seven inhabitants of the U.S. fished or hunted or did both in 1950, according to the 1951 annual report of the secretary of the interior. Hunting licences, sold by the states and tabulated by the federal Fish and Wildlife service, showed that a total of 12,626,539 such licences were issued in the 48 states during the year ended June 30, 1950. In addition, the service reported the sale during this period of 1,954,734 federal migratory bird hunting stamps, the so-called duck stamps required of all wildfowl hunters over 16 years of age. Preservation of wildlife in the face of this hunting pressure and in the face of the continually increasing projects for the use of wildlife habitat for other purposes remained one of the outstanding concerns of U.S. conservationists in 1950.

National interest in waterfowl was particularly high, as these birds are outstanding among the game birds given federal protection in accordance with international agreements

for the conservation of migratory birds. The 1950 annual estimate by the Fish and Wildlife service, based on a January inventory but completed and announced in April, indicated a decrease of nearly one-fourth in the waterfowl populations of the continent. The increases hoped for when the liberalized shooting regulations were adopted in 1949 had not materialized. Nevertheless, the year's hunting rules adopted by the secretary of the interior in August provided seasons of the same length as in 1949 in the Atlantic and central fly way states and increased the length of the season in the Pacific fly way states, shortening the season in only one of the country's four fly ways; namely, in the Mississippi fly way where it was cut from 40 to 35 days.

A new official list of 522 migratory birds protected by federal law, announced in May, included 65 species never before listed which investigations had proved to be migratory under the terms of treaties with Great Britain and/or Mexico. The additions included such conspicuous birds as the cardinal, road runner and fork-tailed flycatcher.

In addition to providing legal protection for migratory birds, the federal government maintained a system of 282 national wildlife refuges, as well as sanctuary areas within the national park system. Wildlife conservation was also among the objectives in the multiple-purpose administration of the national forests. Under the terms of the federal Aid for Wildlife Restoration act the sum of $8,673,517 from the federal excise tax on the manufacture of sporting arms and ammunition was apportioned to the 48 states in Sept. 1950 for state projects. The states were required by the act to contribute 25% of the cost of their programme and to obtain federal approval of the proposed projects.

Special efforts were made by conservationists to provide sanctuaries for species threatened with extinction. Creation of a 1,300-ac. sanctuary containing all the North American area in which ivory-billed woodpeckers had been observed since 1947 was announced in October by the Florida Game and Fresh-Water Fish commission and the National Audubon Society. A proposal to create a condor sanctuary in the Los Padres National forest in California, recommended by the U.S. Department of Agriculture with the backing of the National Audubon society and other conservation organizations, was pending at the year's end before the secretary of the interior who would have to withdraw the area from disposition under the public land laws. The particular threat to the condors was from possible oil or gas drilling operations or explorations.

The American Society of Mammalogists, meeting at Yellowstone National park in June, expressed special concern with the predatory animal and rodent control policies in the U.S. and urged the federal Fish and Wildlife service to re-examine these policies and to expand its research programme to meet the "great need of ecological information on animals requiring control." (*See* also NATIONAL PARKS.)

(H. Z.)

WINDWARD ISLANDS. British colonies of Dominica, St. Lucia, St. Vincent and Grenada, a group of islands forming the southern part of the Lesser Antilles in the Caribbean. The Grenadines, a group of small islands, are partly included in the colony of St. Vincent and partly in Grenada.

	Area (sq.mi.)	Population (1946 census)	(1949 est.)
Dominica	305	47,624	52,000
St. Lucia	233	70,113	85,000
St. Vincent	150*	61,647	66,000
Grenada	133*	72,387	75,000
Total	821*	251,771	278,000

* Excluding the Grenadines (8 sq.mi.).

Pop.: 95% Negro; some Caribs on Dominica. Language: English; on Dominica also French *patois*. Religion: Christian of many denominations. Principal towns (pop., 1946 census): St. George's (cap. Grenada, seat of governor, 5,774); Roseau (cap. Dominica, 9,751); Castries (cap. St. Lucia, 7,056); Kingstown (cap. St. Vincent, 4,831). Administration: governor, exercising authority in all four colonies, and (in each colony) an administrator, an executive council (1 official member, 3 members from the elected members of the Legislative Council, and 1 member from the nominated members) and a Legislative Council (administrator as chairman, 2 *ex officio*, 3 nominated and 8 elected members). Governor; Sir Robert Arundell.

History. Details of important changes in the constitutions of the four colonies were announced on July 24, 1950. The most important of them was that the franchise should be on universal adult suffrage. It had been announced in 1949 that the right to vote should be subject to a literacy test; but this reservation was dropped. The three "elected members" of the executive council were to be chosen by vote of the whole Legislative Council; and the Legislative Council would be empowered to remove from the executive council, by a two-thirds majority vote, any member thus selected. The constitutional status of the executive council as advisory to the governor would remain unchanged; and the governor himself would continue to retain reserve powers. The first elections under the new constitution were to be held in 1951. Grenada was the first of the British West Indian colonies to accept the report of the Standing Closer Association committee proposing a federal government for these colonies. By the end of the year the three other Windward island colonies had also done so.

The question of communications continued to exercise the Windward Islands throughout the year. The shipping services among these islands were scanty and there were serious difficulties in airline operations. Dominica had no airfield at all, the landing ground at St. Vincent had been declared to be unsafe for commercial aircraft, and the airfields in both Grenada and St. Lucia suffered from certain disadvantages. Tests with amphibian aircraft were carried out during 1950 but proved disappointing. Hopes of improved communications were, however, revived at the end of the year by statements that renewed attention would be paid to airfield development and the establishment of a regular land-plane service.

Agricultural and other development plans proceeded during the year. Dominica, the least developed of the islands, was the scene of special activity, with the Colonial Development corporation carrying out operations in connection with the citrus industry and road development being pushed forward with the aid of colonial development funds. The work of rebuilding Castries, the capital of St. Lucia, which was almost wholly destroyed by fire in 1948, went steadily ahead.

Finance and Trade. Currency: West Indian dollar ($4·80=£1 sterling).

	Revenue (1950 est.)	Expenditure* (1950 est.)	Imports (1949)	Exports† (1949)
Grenada	$2,504,800	$2,482,004	$5,410,559	$4,403,535
St. Lucia	$1,905,902	$1,718,024	$5,248,187	$1,488,858
St. Vincent	$1,337,922	$1,448,367	$3,158,309	$2,134,789
Dominica	$1,181,767	$1,281,630	$2,371,754	$1,363,625

* Excluding colonial development schemes. † Including re-exports.

Principal exports: arrowroot, bananas, citrus products, cocoa, copra, cotton (Sea Island), mace and nutmegs, sugar. (P. H.-M.)

WINES. In consequence of the reconstruction of vineyards damaged in Europe and north Africa during World War II, as well as to the development of vine-growing in certain countries, especially in North and South America, the world production of wines showed a steady and considerable increase. The 1950 production was estimated at 190

WORLD PRODUCTION OF WINES
('000 hectolitres)

	1938	1946	1949	1950 (est.)
Algeria	22,390	9,500	14,467	14,305
Argentina	9,262	8,989	7,000	7,900*
Australia	928	1,174	1,554	1,400
Austria	1,171	1,266	971	1,100
Brazil	756	969	737	802*
Bulgaria	2,373	1,546	426	426†
Canada	178	251	230	250*
Chile	3,595	2,629	3,282	4,070
Cyprus	225	217	240	215
Czechoslovakia	150	583	424	435
France	57,908	31,562	42,935	61,300
Germany	2,445	1,194	1,363	3,057
Greece	4,045	2,572	5,240	4,234
Hungary	3,259	3,893	3,173	3,411*
Israel	30	59	47	40*
Italy	41,780	33,725	35,776	35,700
Japan	6	51	51	51‡
Lebanon	10	4	29	28*
Luxembourg	82	73	22	150
Malta	32	30	36	28*
Mexico	—	—	172	172†
Morocco	782	334	499	710
New Zealand	7	22	23	22§
Peru	100	154	190	181§
Portugal	10,955	6,796	7,893	8,147
Rumania	9,924	4,137	4,136	4,000§
Spain	16,000	17,345	14,300	15,680
Switzerland	345	729	551	400
Tunisia	1,976	549	885	761
Turkey	123	180	170	144
Union of South Africa	1,631	2,627	2,609	2,657
United States	2,692	4,354	3,789	4,542
U.S.S.R.	5,000‡	8,000‡	8,000‡	8,000‡
Uruguay	705	739	720	689§
Yugoslavia	4,663	4,121	4,150	5,160
Total‖	205,561	150,405	166,124	190,204

* 1948-49 average. † Production of 1949. ‡ Rough estimate. § 1947-48 average.
‖ Including certain countries with insignificant production.

million hectolitres (hl.) as against 166 million in 1949. The increase of 24 million hl. was chiefly due to the accrued production of wines in Europe in general and in France in particular where the increase exceeded 18 million hl. (*see* Table). As the 1950 harvest in France was bigger than that of 1938, wine producers were anxious for the future of their products in face of declining markets.

Production in Europe, viewed as a whole, amounted in 1950 to 151 million hl., as against 129 million in 1949. North African production in 1950, 15·8 million hl., nearly equalled that of 1949. In the United States, California's production, compared with 1949, showed a 12% increase. South American production amounted in 1950 to 13·6 million hl., which was 1·6 million hl. more than in the previous year.

Generally speaking, the quality of wines in 1950 appeared irregular enough in Europe and the 1950 vintage should not be considered as "a great year's" one. Nevertheless, there were many sorts of good wines in the countries of high vintage reputation as in France, Bordeaux (claret), Burgundy, Côtes-du-Rhône, Anjou and Alsace wines; in Italy, Chianti, Barolo and Barbera; in Portugal, port and Madeira; in Spain, sherry, Malaga and Rioja wines; and in Germany, Rhine (hock) wines. (B. A. S.)

WOMEN'S ACTIVITIES. In Great Britain Queen Mary presented on Jan. 27, 1950, a twelve-panelled carpet she had worked in gros-point needlework to be sold in North America to help the nation in its efforts to meet its dollar needs. It had taken the Queen Mother eight years to make the carpet. After a tour of the United States and Canada the carpet was acquired by the Imperial Order Daughters of the Empire, a Canadian organization akin to the Women's Voluntary Services in Great Britain.

The question of educational opportunities for women was among items considered by representatives of 13 nations at the fourth session of the Commission on the Status of Women held at Lake Success, New York, May 8-19. Other subjects on which the commission reported to the Economic and Social council included the political rights of women, the application of penal law to women and equal pay for equal work.

In the international field, the Associated Country Women of the World, with a 5½ million membership, made rural welfare a major theme of the sixth triennial conference held in Copenhagen in September. Under the leadership of Margaret Hockin of the Rural Welfare division of the Food and Agriculture organization of the United Nations, members from Sweden, Norway, Switzerland, the Netherlands and New Zealand spoke on health, housing, education, nutrition, and child welfare and training. An emergency resolution endorsed U.N. policy in Korea. The organization continued during the year to be represented at conferences of F.A.O., U.N.E.S.C.O., the Economic and Social council and its Committee on Non-Governmental Organizations; and Mrs. Raymond Sayre, U.S., who was re-elected president of the Associated Country Women, served on the standing advisory committee of F.A.O.'s Rural Welfare division. By September the Country Women's letter-friend scheme had passed its target of 10,000 and linked 320 groups in different countries.

Dedicated to the cause of securing enfranchisement for the women of all nations, the International Alliance of Women during 1950 concentrated its efforts on the programme adopted at the 15th international congress in Amsterdam in 1949. Active support was given to national and international measures for removing discriminations against women; and, continuing its work for world peace through the United Nations, the alliance sought to widen the circulation and discussion of the Declaration of Human Rights and supported the draft Covenant of Human Rights, the draft convention for the suppression of traffic in persons and the convention on genocide. Delegates from 14 nations in December attended a social study course in Sweden under the inspiration of Dr. Hanna Rydh, president of the alliance.

Nearly 600 members of the International Federation of University Women took part in the tenth conference held in Zürich and Basle, Aug. 5-12. Problems arising from different aspects of the theme "Human Rights: The Task before Us," on which addresses were given by eminent exponents, were studied by 12 working groups. Despite the dissolution of the Czechoslovak and Polish associations and the lack of communication with those of China and Hungary, membership in 1950 rose by 9,000 in 30 national associations of university women.

Resolutions calling for an immediate cease-fire in Korea, for a mediation commission to secure a basis for a general settlement, for an international disarmament conference and for an immediate truce in the production of weapons of mass destruction were adopted by the international executive of the Women's International League for Peace and Freedom meeting in Liverpool, England, July 25-31. The first of an annual series of international gatherings was scheduled to be held in Aug. 1951 at San Remo, Italy, and in Paris. The British section of the league, under the presidency of Lady Parmoor, supported the Rev. Michael Scott in his work for the people of South and South-West Africa.

Mrs. Geoffrey Fisher, wife of the archbishop of Canterbury, central president of the world-wide Mothers' Union, addressed an enrolling members' conference at the Royal Albert hall, London, on June 6. She emphasized the need for a competent, vital Christian society to defend the family and provide parents with a true understanding of the importance of their role.

In London also took place during July 31-Aug. 5 the fifth international congress of the International Federation of Business and Professional Women at which some 2,500 delegates from 20 countries discussed questions relating to the trained woman's capacities as a partner in world affairs. A government reception at the Tate gallery, a reception by the L.C.C., and a Guildhall banquet—the first instance in the history of the Guildhall of its being thrown open to a women's organization—were acknowledgments of the value of the federation's contributions to national affairs.

Great Britain. The year, which opened with the failure of 126 women candidates to gain more than 20 seats at the general parliamentary election on Feb. 23, was characterized by the persistent endeavours of almost every organized group of women to secure the application of the principle of equal pay. To promote the equal status of women in all fields more than 50 women's associations sponsored the production of a film *To Be A Woman* by Jill Craigie, backed by the National Union of Women Teachers. At the Trades Union congress at Brighton on Sept. 9 Betty Jones, a London postal clerk, won the support of the congress by a majority of 2,123,000 votes for a decision calling on the general council to increase pressure on the government for equal pay.

The Ministry of Labour's annual report published on Sept. 4 disclosed that the return of women to industry primarily accounted for a large increase in Britain's total working population during 1949, the number of women in employment rising during the year from 7,116,000 to 7,244,000. During Nov. 1950 the total number of workers in civil employment rose by 38,000, all women; but among registered unemployed there were 46,446 married women.

Investigations carried out in 1950 by Birmingham university research workers in midland factories, summarized in a report published in May, suggested that the morale of women workers might be higher that that of men. On the other hand, according to a survey published on Aug. 24 by the British Institute of Management, industry's biggest loss of labour was still due to women's leaving their work for other reasons than merely wanting a better job, the average percentage leaving each year being 45·4 against the men's 27·6.

A pioneer organization set up in 1895, the National Council of Women in 1950 continued to serve the interests of the social, civil, moral and religious welfare of the community. Many problems connected with woman's social and economic difficulties were debated at the annual conference at Bournemouth Oct. 9-12, and motions were adopted calling for higher salaries for all teachers, for special day and residential schools for handicapped, maladjusted and educationally sub-normal children, for better hospital provision for the aged sick and for measures and research leading to greater accident prevention in the home. Special weight was given to a resolution urging the government to produce more and better houses more quickly and at lower cost, and to place greater responsibility on the building industry for bringing this about.

Celebrating the 21st anniversary of its foundation, the National Union of Townswomen's Guilds, which received grants from the Ministry of Education, the Scottish Education Department and the Carnegie United Kingdom Trust, continued its work as an educational organization and as a movement providing a common meeting-ground for women of every creed, political party, age-group and income level.

Though mainly concerned with local government and the promotion of active, intelligent citizenship, the National Women Citizens' association through a parliamentary sub-committee maintained also an alert watch on women's interests in parliament. Many women councillors from England and Wales attended their tenth annual local government conference at Caxton Hall, Westminster, on Oct. 27 when questions relating to housing and town and country planning were discussed.

Of considerable sociological importance was the publication in June by the National Federation of Women's Institutes of *Your Village*, a report on amenities and public services in rural areas compiled from replies from 6,747 villages in England and Wales to a questionary circulated in 1949. Some 4,000 delegates representing nearly half a million members at the 30th annual meeting in London on June 13 and 14 were informed by the chairman, the Countess of Albemarle, that membership had increased by over 135,000 since the end of World War II. On June 15 the national singing festival, in which 1,230 Women's Institute choirs had competed, culminated in a performance at the Royal Albert hall of Dr. R. Vaughan Williams' specially-composed cantata, " Folk Songs of the Four Seasons." A conference on food and people on June 1 was followed on Nov. 21 by another on crime and responsibility which focused on the problem of juvenile delinquency. On Aug. 3 the federation sent their second deputation of the year to plead with the minister of food for a larger sugar ration.

During the year the Women's Voluntary Services extended their co-operation in many fields of social welfare and also resumed the civil defence activities which they had carried out during World War II. At a mass meeting organized by the W.V.S. in London on Nov. 7 the home secretary appealed to representatives of many women's associations to join the civil defence services. On June 20 some 3,000 members of the W.V.S. were addressed in London by Mrs. Eleanor Roosevelt on " Women's part in the world to-day: the tasks of peace."

In the spring of 1950 British housewives effectively directed organized protests against high prices of fish and vegetables, their revolt in the latter case expressing itself in many parts of the country by a one-week boycott of greengrocery shops from May 8; and on Aug. 2 a deputation of the Housewives' League on behalf of 60,000 housewives in the northwest of England registered complaints against laundry services and charges at a meeting called by the Institution of British Launderers in Manchester.

The Commonwealth. The appointment of Mrs. Mary Tenison Woods, of Sydney, as chief of the Status of Women section of the Human Rights division of the United Nations was announced in April. The promise of equal status with men and equal pay for equal work was secured by women civil servants in New Zealand in February. Women's developing desire for acknowledged status under the country's laws was voiced in South Africa in March by Mrs. Bertha Solomon, United party member for Jeppe division, Johannesburg, who moved in the Assembly that the recommendations of the Women's Disabilities commission set up some years previously be included in a bill and that the government pass it without delay. Common law changes in respect of marriage, guardianship of children, divorce and property-ownership were among the initial demands indicated by Mrs. Solomon, who claimed to speak for 95% of her fellow-countrywomen. In September nine top-ranking Canadian women editors visited Britain on a three-week fact-finding mission at the invitation of the Dollar Export board and the Dollar Sterling Trade board of Canada. The team represented a readership of more than 7 million women and an even larger radio public.

Proclamation of the independent republic on Jan. 26 opened up further encouraging vistas in India for the country's 90 million women voters who, since equality of status had first been conceded in the Objectives resolution of 1947, had advanced steadily along many roads made free to them by access to education and by political and economic changes. The hopes of the women's movement had been raised by the constitution's recognition of women's right to complete

equality with men. Mrs. Hannah Sen, an educationalist who had played an important part in the cause, was elected president of the All India Women's conference.

For the All Pakistan Women's association 1950 was also a year of progress, and at their meeting during Oct. 1-3 the governing body heard of increased membership and expanding activities. Begum G. A. Khan stressed the importance of welfare and literacy work and paid tribute to the interest and influence of the president, Begum Liaquat Ali Khan. Resolutions adopted by the governing body urged on the government the necessity for appointing women to the federal as well as to the provincial public services commissions and appealed for scholarship reservations for women in certain fields of specialized study, for financial allocations for scholarship assistance to refugee girl students, for the establishment of a blind school and for the admission of women to all government services. (D. A. C.)

WOOL. The year 1950 saw all price records broken for wool. Prices in the last quarter of the year reached a point which was 50% to 100% higher than the previous record level in the boom of 1919-20, and eight to eleven times the average prices ruling during the five prewar years 1934-38. Values were on the up grade at the beginning of the year, after the spurt given by the devaluation of sterling and the general tendency towards inflation. The outbreak of the Korean war and plans for rearmament provided a further impetus. A fundamental factor, however, was that for some years the world's wool industry had been using wool at a rate some 15% to 20% in excess of the rate at which wool was being grown. The gap was filled from wartime accumulations in the hands of the joint organization (U.K.-Dominion Wool disposals) and the Commodity Credit corporation in the U.S.; and in 1950 the industry was faced with the exhaustion of these supplementary supplies. The manner in which joint organization stocks had been reduced was shown by the following figures: July 31, 1945, 10,407,000 bales; June 30, 1948, 3,218,000 bales; June 30, 1949, 1,700,000 bales; June 30, 1950, 484,000 bales. The remaining stock was expected to have been entirely liquidated by June 1951.

When the International Wool Study group met in London in October its conclusions were that for the 12 months July 1949 to June 1950 the production of apparel wool would be 1,850 million lb. clean and this, plus 368 million lb. from joint organization and Commodity Credit corporation stocks, made a total available supply of 2,218 million lb. clean, which was equivalent to the rate of consumption during the first six months of 1950. For 1950-51 production was estimated at 1,865 million lb. clean, plus 89 million lb. from joint organization stocks, making 1,954 million lb., or 12% below the rate of consumption in the first half of 1950 when rearmament requirements had not made themselves felt. The group considered, however, that despite rearmament requirements the high price-level would be sufficient to reduce consumer demands to a point which would bridge the apparent gap between consumption and available supplies.

Before the study group met, meetings had been held in London between representatives of Australia, New Zealand, South Africa, the U.S. and the United Kingdom to deal with the desire of the U.S. to be assured of supplies of 100 million lb. clean for the stock-piling of military clothing. The upshot of the discussions was a proposal whereby the U.S. should be allowed to earmark (or pre-empt) certain quantities of wool at the dominion auctions, this wool to be withdrawn from the catalogue and paid for at current auction prices. A further conference took place in Melbourne in November to see whether practicable arrangements on these lines could be made.

So far as the consumption of wool in 1950 was concerned, the setback in trade in the U.S. in 1949 was followed by a sharp recovery. In August stocks of apparel wool in the U.S. were estimated to be the lowest for the time of the year since 1936, but larger purchases increased stocks in the later months of the year. In Canada conditions were not too good, and the domestic industry was not fully employed. On the other hand, wool requirements in Western Germany and in Japan showed a sharp increase, and European consumption generally was well maintained. In the United Kingdom consumption was appreciably greater than in 1949; slackness in the woollen section in the middle of the year was overcome as a result of military contracts and a spurt in retail trade caused by consumers buying in anticipation of higher prices. United Kingdom exports continued to expand, notably in wool tops.

In the wool-producing countries the enormously increased revenue from wool sales created inflationary problems, and in Australia the government introduced provisions requiring the pre-payment of tax to the extent of 20% of the sums obtained from the sale of wool, and reintroduced a subsidy to home manufacturers of £A 20 million.

It seemed rather anomalous that at a time of record high prices the dominions should put forward proposals for a reserve-price scheme to be inaugurated when the joint organization came to an end, with the object of cushioning the wool-growing industry against slumps. For this purpose a large fund would be necessary, and provision had been made for raising the fund by levies on growers. The intention of the scheme was to buy in wool if it failed to reach a seasonal reserve price. The scheme was approved in principle at the International Wool Study group in October thus enabling the dominions to make the necessary arrangements. Approval was, however, subject to reconsideration when buying-in operations were expected to assume substantial proportions. This reconsideration would deal with the position under the Havana charter and the question of consumer representation.

In the United Kingdom the arrangements for the compulsory purchase of the domestic clip of fleece wool by the Ministry of Agriculture were discontinued, but the British Wool Marketing board, operating on similar lines under the auspices of producers, was set up in October. (*See* also TEXTILE INDUSTRY). (C. F. M.)

WORDS AND MEANINGS, NEW. The words listed below became prominent or seemed to be used for the first time during 1949 and 1950. Dates in brackets after a word or definition indicate the first recorded use of the new word or meaning in the files of the compilers. A hyphen before a date means that the word or meaning is suspected to be older than the date given. If no date is given, the first record on file is 1950.

air coach (U.S.). An airliner with inexpensive accommodation (-1948).

alometer, *n.* An instrument which records the beat of a bird's wings and so the distance flown, on the same principle as that by which a pedometer measures the distance walked by a man.

Antifa, *n.* General term for German underground resistance (anti-fascist) organizations (1949).

astronautics, *n.* The science of travel between planets.

autotronic elevator (U.S.). An automatic, electronically operated lift capable of moving at a rate of 700 ft. a minute (-1949).

berkelium, *n.* Suggested name for the synthetic element 97, produced by the University of California. Named after Berkeley, California, it bears the symbol Bk.

Boogie-Woogie boat. An experimental boat of the Royal Air Force started, reversed and steered by different musical tones transmitted by radio from a mother ship.

bopera *n.* (U.S.). A night club, restaurant or the like specializing in "bop"—a type of dance music (1948).

Braford, *n.* Cattle crossbred from Brahman and Hereford strains (1947).

bumper missile, rocket (U.S.). A rocket with a booster which continues to propel the rocket after its initial supply of fuel has been consumed.

californium, *n.* Synthetic radioactive element 98, made at the University of California by the bombardment of curium, element 96.

charactonym, *n.* A name denoting a character's occupation or outstanding trait (1949).

cinerama, *n.* A type of film projected onto a screen with an arc that covers a field of vision about 146° wide and 55½° high.

colorcast, *n.* (U.S.). A broadcast of colour television.

colour conditioning. The use of colours to which people react favourably (1947).

Coxsackie virus. Any of a group of mysterious filterable viruses, the first of which was isolated in a patient in Coxsackie, New York, causing symptoms ranging from those of a slight cold to poliomyelitis.

death sand. Radio-activated dust which, spread over enemy territory, would serve as an invisible deadly weapon.

defactoist, *n.* One who recognizes a *de facto* government.

cartophily, *n.* The hobby of collecting cigarette-cards.

cartophilist, *n.* A cigarette-card collector (-1949).

democratic centralism. A Communist system of government in which recommendations are passed upwards through successive stages of popular assemblies from the lowest to the highest and debated in the uppermost assembly, whose decisions are then passed back downwards.

deviationism, *n.* Non-conformity to the Communist party's policy and directives (-1948).

dianetics, *n.* A system of psychotherapy aimed at relieving psychosomatic illnesses by working on the sub-mind.

disciplined fabric. Cotton cloth treated to resist creasing and shrinking.

dot-sequential system. *See* **sequential system, etc.**

electrohysterograph, *n.* A machine which can predict whether a prospective mother's labour will be normal or abnormal and whether given symptoms are true or false labour pains.

femineered, *adj.* (U.S.). Designed by a woman.

field-sequential system. *See* **sequential system, etc.**

fire fight. Close rifle fighting.

flame out, *v.i.* Of a jet plane, to exhaust its supply of fuel (1948).

fusion bomb. A bomb in which atomic nuclei are caused to combine with a release of energy (contrasted with fission, in which a large nucleus breaks into parts having a total mass less than the original nucleus; fission takes place with a heavy element like uranium 235, fusion with a light element like hydrogen).

geriatrics, *n.* The science of the diseases peculiar to old age. **geriatric,** *adj.* (1949).

Goebbelesque, *adj.* Applied to a politician who makes different promises to different sections of an electorate hoping that the election will be over before they can "compare notes."

Gook, *n.* (U.S. slang.) An Asiatic, especially a native of Korea.

guitar look. A style of women's contour with narrow waist and wide hips and bust.

infrastructure. The material backing enabling a higher military command to function and forces to be deployed (-1950).

line-sequential system. *See* **sequential system, etc.**

McCarthyism (after Joseph B. McCarthy), *n.* (U.S.) Repeated accusation, especially of Communist connections.

marginal land. Land which requires exceptional financial outlay in its treatment in order to attain and in general maintain the level of production which is compatible with the national interest.

micromanipulation, *n.* The use of minute apparatus for controlling objects under the microscope.

norm, *n.* The minimum compulsory output of workers under Communist regimes.

objectivism, *n.* A Communist term for undue objectivity in the consideration of Titoist and diversionist arguments.

Ompa. Short for octomethyl pyrophosphoramide, a drug helpful in the treatment of myasthenia gravis, a disease of the muscles.

phantom order (U.S.). A tentative order, to be filled only in an emergency such as war (1948).

phillumeny, *n.* The hobby of collecting match-box covers.

phillumenist, *n.* A match-box cover collector.

Plumericin, *n.* Tentative name of a fungicide and test-tube antibiotic.

practicalism, *n.* A Communist term for the fault of paying too much attention to practical problems of production, etc., and not enough to ideological propaganda.

Queuetopia, *n.* Winston Churchill's coinage to describe the Utopia of the Socialists, a salient characteristic of which is assumed to be queues.

radiogenic, *adj.* Such as will be effective when transmitted by radio.

radiological warfare. Warfare with radioactive material.

radio star. A star whose luminosity is so low that its existence is known only through short-wave radio emanations.

railplane, *n.* A fast railcar, running on two rails, one above from which it hangs, and one below.

Rok, *n.* (U.S.). (1) Republic of Korea; also used attributively, as, "a Rok division." (2) A South Korean soldier.

scintillation counter. A highly sensitive device for detecting radioactive materials which employs a number of synthetic crystals (1949).

sequential system, dot-, field-, line-. Colour television systems (1949). (*See* TELEVISION.)

shaped charge (U.S.). A charge making use of the Morse principle, whereby the impact of a shell throws forward a thin stream of hot particles which, travelling at a high velocity, cut a path through the object struck for the shell to follow (1948).

slope-line system. A fog-landing system for airports employing on either side of the landing strip rows of lights which decrease in height and thus form a "slope-line" for the descending plane (1948).

space opera (U.S.) Trade term for a science-fiction novel (1949).

stutter play (U.S., football). A play consisting of a series of "fakes" or deceptive moves and thus disguising for an instant its true aim (1947).

subminiaturization, *n.* (U.S.). The technique of making even smaller devices, such as radio valves that are already small. **subminiature,** *n.* (1949).

supranational, *adj.* Taking precedence of a country's sovereign independence.

synfish, *n.* An artificial sea-food resembling fish in taste.

syntopicon, *n.* (U.S.). A collection of topics.

telegenic, *adj.* Such as will be effective when transmitted by television.

terylene, *n.* An artificial fabric made from the crude oil by-products ethylene glycol and terephthalic acid.

third force. A phrase in European politics to describe a group acting as a buffer between the Communists and another

party of opposing beliefs; *specifically*, the non-Communist left; also a movement calling for a third power standing between the U.S.S.R. and the U.S. (1947).

Titotalitaria, *n.* (U.S.). The region subject to the Tito form of totalitarianism. **Titotalitarian,** *n.*

triton bomb. The hydrogen bomb, an important ingredient of which is tritium (the nucleus of an atom of tritium is called triton).

Uniscan, *n.* Proposed economic union between the United Kingdom and the Scandinavian countries (1949).

varitrons, *n. pl.* Particles reported by Soviet scientists, so called from the variations in their mass (1948).

Vosnian, *n.* An artificial language of about 1,000 words derived in part from Estonian, Czech, Hungarian and Finnish for the British film *State Secret*.

wedge, *n., golf.* A club used for approach shots, having a very broad sole and great loft.

zebra crossing. A street crossing marked with black and white stripes, to indicate that pedestrians have priority upon it, and vehicles must give way to them. (D. C. B.; I. W. R.)

WORLD COUNCIL OF CHURCHES. The World Council of Churches is composed of some 160 Christian bodies throughout the world, being "a fellowship of churches which accept our Lord Jesus Christ as God and Saviour." The council was formally inaugurated at the first assembly held at Amsterdam, the Netherlands, from Aug. 22 to Sept 4, 1948. The Roman Catholic Church does not participate in the council nor do the churches of the U.S.S.R. and eastern Europe.

During July 8-15, 1950, the central committee met at Victoria university, Toronto, Canada. This body is the governing committee of the World Council of Churches between the meetings of the assembly, which is the sovereign organ composed of officially elected representatives of all the participating churches and normally meets every five years. The central committee consists of 90 members chosen by the assembly, and meets annually. Its officers for the period of 1948-53 were: chairman, Dr. George K. A. Bell, bishop of Chichester; vice chairman, Dr. Franklin C. Fry of the Lutheran Church in the U.S.; secretary general, Dr. W. A. Visser 't Hooft (Netherlands).

The 1950 meeting of the central committee gave considerable time to preliminary plans for the second assembly, which it was hoped would meet at Evanston, Illinois, U.S., in the latter half of Aug. 1953. International committees of theologians and leading churchmen were commissioned to prepare the main themes for it, and their progress would be reported to the central committee meeting in 1951. Other important items included: (1) authorization of the third World Conference on Faith and Order, to be held at Lund, Sweden, in the last two weeks of Aug. 1952; (2) remission for discussion in the churches of a statement entitled *The Church, the Churches and the World Council of Churches*, being a document clarifying the theological principles involved for any given church in its membership in the council; (3) resolutions brought forward by the Churches' Commission on International Affairs (sponsored jointly by the council and the International Missionary council). The most important of these were a statement on the struggle in Korea endorsing the action of the United Nations, a statement on the Stockholm peace appeal and a report on racial problems and the Christian Church, with special reference to South Africa, initiated at the request of the central committee at its previous meeting. (O. S. T.)

X-RAY AND RADIOLOGY. Among improvements in X-ray apparatus and technique achieved during 1950, two were especially worthy of mention. Photoelectric timing had been made practical in 1941 by the work of R. H. Morgan and P.C. Hodges which resulted in the Morgan photoelectric timer; it established its value in photofluorography and had much to do with the success of mass chest surveys for the control of pulmonary tuberculosis. A number of modifications and improvements in the construction of the timer were made, especially with a view to its use in direct roentgenography as well as in photofluorography. Hodges and associates reported on its further improvement during 1950, and A. M. McNabb and associates described the uses of the phototimer adapted to direct roentgenography. The other notable advance in apparatus and technique was the development of electronic intensification of the image on the fluorescent screen. It not only increased the screen brightness 500 times or more but made it possible to make fluoroscopic examinations in a lighted room.

The therapeutic use of radioactive isotopes received considerable attention at the sixth International Congress of Radiology, held in London in July 1950, and many papers on their use appeared during the year. The principal applications in medicine had been the use of radioactive phosphorus in chronic leukemias and polycythaemia vera and radioactive iodine in hyperthyroidism and thyroid carcinoma. Research confirmed the view that radioactive phosphorus is the best treatment for polycythaemia vera and that its action in the leukemias is not essentially different from or more valuable than the X-ray.

Numerous reports on the use of radioactive iodine (I-131) in the diagnosis and treatment of hyperthyroidism appeared. Those of S. C. Werner and associates and of R. A. Shipley and associates constituted a satisfactory summary of knowledge in this field. Radioactive iodine used as a tracer to determine the presence of thyrotoxicosis had become of real diagnostic value in both diffuse and nodular goitre; its accuracy was believed to be greater than that of basal metabolism. The remission rate of 80%-90% in the treatment of hyperthyroidism was essentially the same as that reported in previous years by X-ray treatment. It was generally agreed that radiation is the treatment of choice in toxic goitre recurring after operation, and in the patient who has complications and is unsuited to surgery.

Radioactive iodine had also been found of value in the diagnosis, localization and treatment of metastatic lesions from cancer of the thyroid gland. To obtain the best results in treatment of the distant metastases it is necessary first to resort to either irradiation or surgical thyroidectomy in order that the radioactive iodine may be deposited in the metastases rather than in the thyroid gland itself.

"Radiological defence" against atomic explosions was the subject of much research and discussion in 1950. The potential damage to persons from an atomic explosion are of several different types: (1) Primary shock or blast damage; the best protections are underground shelters and reinforced concrete buildings. (2) Secondary shock, caused by the impact of flying objects or propulsion of the body against solid objects; here again underground shelters are the best protection but if a person is in a building or in the open it is best protected when lying flat on the ground or floor and away from the windows. (3) Flash burns or injuries caused by direct exposure to the visible and near-visible radiation which emanates from the point of detonation of the bomb: the best protection against this is light-coloured clothing. (4) Damage by nuclear radiation. This may be due to "prompt" or "immediate" radiation or to delayed radiation. Immediate radiation damage is due to the large amounts of gamma rays and neutrons which emanate within a fraction of a second after the detonation. Protection against these hazards can be provided only by massive construction such as would be represented by 3 in. to 12 in. of steel, 6 in. of concrete

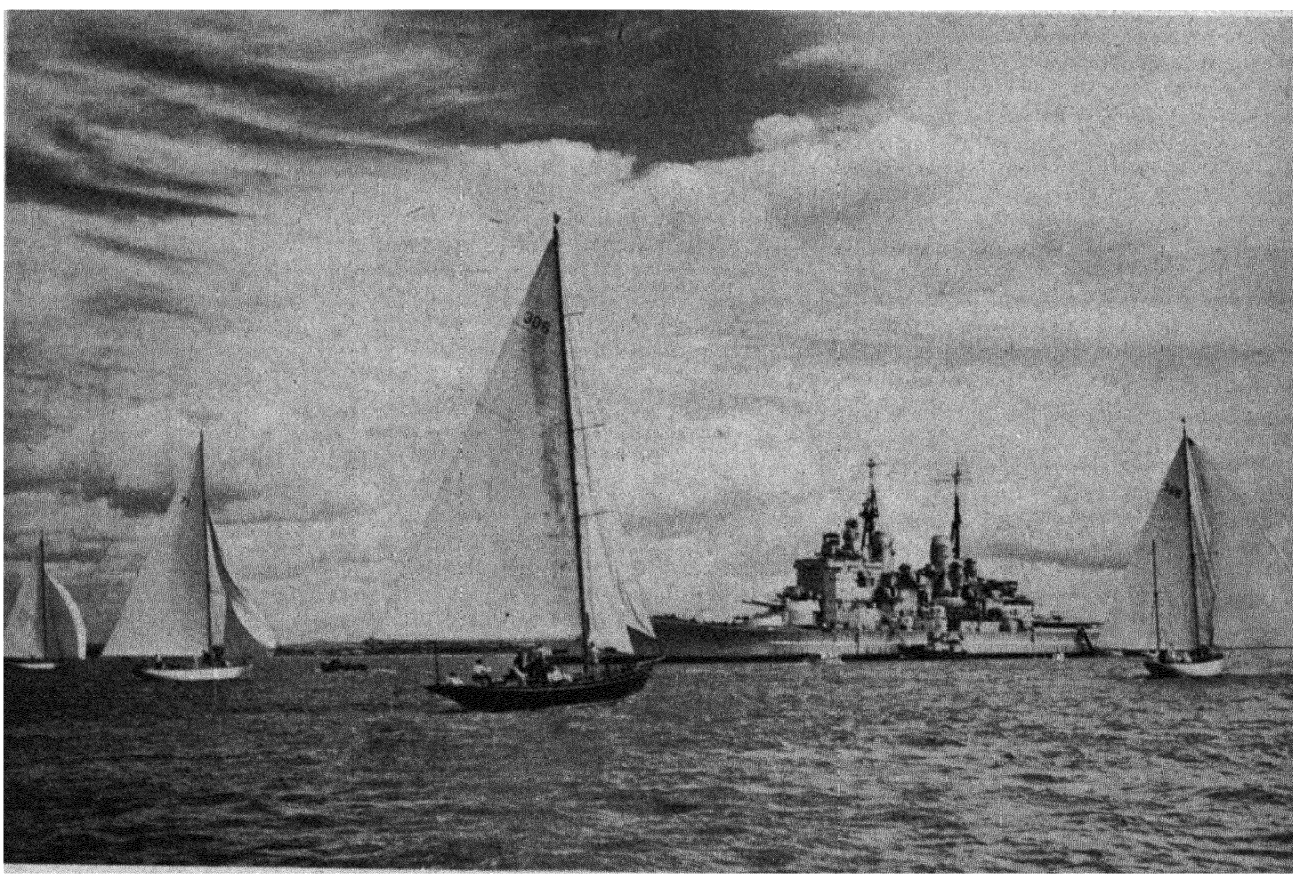
or 6 in. of water, and is therefore feasible only for the most vital installations. Underground shelters and distance are the best protection for human beings. In addition to the dangers from immediate radiation are those due to delayed radiation which is the result of decay of fission products produced by the nuclear explosion and which may spread over an area of five square miles or more and may persist for varying long periods after the explosion. In addition to the above radiation hazards, there is additional danger from nuclear radiation when radioactive materials find their way into the body by inhalation, ingestion, etc. This will happen only to a person who is within the base surge of the explosion, in the mushroom cloud or working in an area over which base surge has passed. (*See* also CANCER; PHOTOGRAPHY; TUBERCULOSIS.) (A. C. CH.)

YACHTING. In 1950 ocean racing, long distance passages and cruises proved to be the most outstanding events of the yachting year. A programme of 16 offshore races, varying from 170 mi. to 2,780 mi. and totalling 6,570 mi., was organized by the Royal Ocean Racing club. The most important of these were the Plymouth-Santander 440 mi. race won by " Samuel Pepys " of 24 ft. load water line (l.w.l.) and the Trans-Atlantic race, 2,780 mi., in which five yachts started on July 2. The winner on corrected time was K. Adlard Cole's " Cohoe," a small sloop of 25·5 ft. l.w.l. All three small boats, " Cohoe," " Samuel Pepys," and " Makoia," 27 ft. l w.l., finished on July 24. " Gulvain," 43 ft. l.w.l., the biggest competitor, built of light alloy, although taking only 18 days was placed fourth on handicap. The fifth boat, " Karin III," a cutter of the Colin Archer type, built in Gothenburg in 1919, took three days longer than the small boats. These five yachts had previously taken part in the American New York-Bermuda race. R. Scholfield's " Blue Disa " took part in the Buenos Aires-Rio race, over 1,200 mi., in heavy weather.

A remarkable passage across the Atlantic by the northern route from east to west was made in only 42 days by Humphrey Barton and Kevin O'Riordan in the Laurent Giles-designed five-tonner " Vertue XXXV." With the vessel beating to windward mostly in bad weather, the distance made good was 3,665 mi. Edward Alcard in the 11-ton yacht " Temptress," built in 1910, crossed the Atlantic single-handed by the southern route. Alcard started in 1949 and at the end of 1950 was making a single-handed return. E. A. Pye, his wife, and one other companion in the ten-ton yacht " Moonraker " left England in 1949 and cruised via Spain and the Azores across the Atlantic to Bermuda, on to the eastern seaboard of the U.S. and back by the same route. These great voyages and ocean races focused attention on small sea-going yachts.

Interest in dinghy racing reached a new intensity and the popular dinghy racing classes showed large increases in the number of boats and in the number of racing fixtures arranged for them. Bruce Banks performed the unique feat of winning the premier award in the Merlin 12 ft. national and 14 ft. international classes. For some years attention had been given to introducing juveniles to the sport of dinghy racing. The *Yachting World* " Cadet " designed in 1947 specially for the purpose and adapted for amateur construction proved an outstanding success and was the largest British dinghy class, almost 1,000 boats having been built. For the first time, a week's racing, " Cadet week," was organized in 1950.

At the meeting of the permanent committee of the International Yacht Racing union held in London in October two new cruiser-racer classes were introduced. The 10·5-m. class replaced the ten-metre and took in the fine fleet of 35 ft l.w.l. Royal Ocean Racing club yachts. The seven-metre was intended to tie up with the smallest Royal



The race for cruising yachts over 25 tons in the 1950 Cowes regatta. In the background is H.M.S. " Vanguard."

Ocean Racing club class of yachts of about 24 ft. l.w.l.

In the Dragon class the Gold cup race, won by T. Thorvaldsen, was held at Vejle, Denmark. The Duke of Edinburgh cup was won by " Blue Skies " (F. R. Woodruffe and C. W. Lawlow). (E. F. Hk.)

YAP ISLAND: *see* PACIFIC ISLANDS, U.S.; TRUST TERRITORIES.

YEMEN. Independent state in the southwestern tip of the Arabian peninsula, between Saudi Arabia (N.), the British Aden protectorate (S.E.), and the Red Sea (W.). Area: *c.* 31,000 sq.mi. Pop. (no census ever taken, 1948 est.): 1,600,000. Language: Arabic. Religion: Moslem. Capital: San'a (pop. est., 25,000). Ruler, Imam Ahmed Ibn Yahya Nasir li Din Allah.

History. During 1950 Anglo-Yemeni relations passed from the recriminatory stage which prevailed in 1949 to friendly negotiations for a wide settlement of the outstanding disputes which had arisen in 1949, mainly on account of the absence of an agreed delimited frontier between the Yemen and the Aden protectorate. Two incidents in particular had provoked trouble. In Aug. 1949 armed bands from the Yemen had prevented the building of a customs house, the site of which, according to the British view, was inside the Aden frontier. In September these bands had erected a fort, also inside the Aden frontier, and when they refused to dismantle it and withdraw, they had been bombed by the Royal Air Force. The second and more recent incident had arisen from the visit of a party of British geologists to prospect for oil in territory which the Yemeni government contended was outside the Aden protectorate frontiers. Finally there was the more general problem of the establishment of proper diplomatic relations between the two countries. Hitherto they had been conducted through the British governor of Aden, as the imam of the Yemen had consistently refused to admit foreign representatives to his capital, San'a.

The negotiations between the two countries were opened in London on Aug. 29. The British delegation comprised senior officers of the Foreign and the Colonial offices. The Yemen was represented by M. A. al Amri, the deputy foreign minister, and Hassan Ibrahim, the minister of state. Discussions ended on Oct. 12 when a joint statement was issued that the delegations had agreed to submit to their governments proposals providing a sound basis for strengthening the friendly relations between the two countries including recommendations on the setting up of machinery for the settlement of disputes.

Unofficial negotiations were also conducted between the two governments regarding the oil dispute. They opened on the basis that a mutually accepted solution was the object of the negotiations; and, in this spirit, the British delegation, while adhering to the British view regarding their territorial rights over the area which had been prospected, offered a proposal that, Yemeni interest in development being accepted, both governments should agree to a mutual control of the fields if they should materialize and that, in this event, an Anglo-Yemeni Oil company should be formed to exploit them. The fields were situated in an area which was not dealt with in the frontier agreement negotiated between the two governments in 1934.

In the sphere of Arab league policy the Yemeni government associated itself with the resolution qualifying Jordan's annexation of Arab Palestine (June 12). In February the United States announced the resumption of diplomatic relations with the Yemen which had been broken off in 1948 when the late imam of the Yemen was assassinated. (O. Tw.)

Agriculture. Main crops: wheat, barley, millet and coffee.



Mohammed Abdullah al Amri, deputy foreign minister of the Yemen, who visited London in Jan. 1950.

Foreign Trade. Imports from the U.K. (1949; 1950, six months, in brackets) £1,750 (£3,236); exports to the U.K. (1949) £210. Principal exports: coffee, food grains, hides and raisins.

Finance. Monetary unit: Maria Theresa dollar, called the *riyal*, nominally = Re.1 (Indian) with an exchange rate of 13·33 riyals to the pound.

YOUNG MEN'S CHRISTIAN ASSOCIATION. In 1950 the World's Alliance of Young Men's Christian Associations continued substantial work with the displaced persons in Germany and Austria and with refugees in the middle east. More than 200 delegates met in the plenary meeting of the world's committee in Denmark; world consultations on leadership and boys' work were held in the U.S., and a young men's conference in Europe. Membership rose to more than 3,600,000, in nearly 10,000 associations throughout 76 countries, John Forrester Paton (Great Britain) continued as president, and Dr. Tracy Strong (United States) as general secretary.

In Great Britain the Y.M.C.As., with a membership of over 98,000, maintained and extended their activities in some 470 local centres. Similar programmes served H.M. forces in over 300 centres and hostels at home and in 14 overseas countries: in the British zone of the Rhineland special features included arts festivals and " British Commonwealth in the Modern World " exhibitions. Fourteen German Y.M.C.A. leaders spent a month studying British methods; British members visited Germany. Community services continued to house and serve thousands of British and European workers in industry, agriculture and forestry, as well as engineering apprentices and horticultural students. Over 900 town boys were trained for agricultural work, bringing the total to more than 9,000. The " Warfleet " sea training scheme continued. More than 1,000 volunteer leaders carried on their part-time training. Sir Frank Willis continued as general secretary of the national council and K. Dickson as general secretary of the Scottish national council. (R. W. J. K.)

In the United States during 1950, 24 states conducted "model legislatures" under a youth-and-government programme. Endowments totalled $48,990,500. The principal officers were: Harper Sibley, president; Eugene E. Barnett, general secretary.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION. In 1950 the Y.W.C.A. of Great Britain celebrated its 95th birthday by a concert at the Royal Albert hall, at which Princess Margaret received purses for the association's work.

The Y.W.C.A. had 400 hostels, clubs and holiday houses in Great Britain, to provide accommodation for students and for young girls taking up their first posts away from home. It was particularly felt that in the understanding and application of Christian values lay the constructive answer to Communism and the foundation of world peace.

Staff and financial support were still provided under the Mutual Service committee of the World's Y.W.C.A. for the association's work in West Africa, India, Iraq and China. Clubs catered for service women and others in Germany, Austria, the middle east and Hong Kong.

Financial problems loomed large in 1950 in connection both with the maintenance of the clubs and hostels and with the work of the national committees: economies had to be effected in many directions. Principal officers were: Mrs. Frederic Newhouse, national president; Miss Ruth Walder, national general secretary. (R. WR.)

In the United States the following were the principal officers of the Y.W.C.A. in 1950: Mrs. Arthur Forrest Anderson, president; Mrs. Roland P. Beattie, treasurer; Mrs. Harrison S. Elliott, general secretary.

YOUTH EMPLOYMENT. Young workers continued to be in great demand in 1950, for the numbers available were substantially less than before the war. There were two main reasons for this: one was the low birth-rate of the 1930s, which accounted for a 25% reduction on prewar figures; and the other was the raising of the school-leaving age in 1947, which had the effect of keeping 300,000 boys and girls at school for a further year. The scarcity of juveniles enhanced the importance of training, emphasized the need for making the best use of the young workers available and increased the value of the advisory and placing services of the youth employment service. The great majority of young workers were employed by medium and small firms, only about 20%-25% of school-leavers entering firms employing more than 2,000 workers. This had an important bearing on the problem of training; and largely for this reason National Joint Recruiting and Training councils had been established in some 50 sections of industry. These councils operated through local joint committees which had been set up to help individual firms to apply and adapt to their requirements general principles of recruiting and training formulated by the national bodies. Schemes varied between one industry and another, but the general aims were to secure: (1) good reception of new entrants, (2) avenues of progress for young workers, (3) welfare facilities, (4) planned practical training and (5) release for part-time further education.

The youth employment service continued to develop in pursuance of the Employment and Training act of 1948, and it was interesting to note the number of local education authorities which submitted schemes under section 10 of the act with a view to operating the service in their areas. Before 1948 only 65 local education authorities in England and Wales maintained juvenile employment bureaux but, as a result of the act, 116 authorities submitted schemes and in Scotland 13 authorities decided to do so. Where the local education authority had not opted to administer the service, it was conducted wholly by the Ministry of Labour; but in all cases the functions of the service were similar, namely (1) to collect and disseminate information about careers for young people under 18 years of age, or over that age if still at school, (2) to advise and assist them in the choice of employment and (3) to help employers in filling their vacancies. Much valuable work was done by means of school talks, interviews at the school-leaving stage, individual guidance during the initial post-school years and assistance of boys and girls with special aptitudes, literature about careers and films giving vocational guidance. (W. O. L. S.)

United States. Nearly 2,500,000 minors between 14 and 17 years of age were employed full-time or part-time in Oct. 1950, according to estimates of the U.S. Bureau of the Census, a slightly larger number than in any October since 1945. Of these, 916,000 were 14 or 15 years of age, and 1,553,000 were 16 or 17 years of age. Two out of three in the 14 to 17 group were in non-agricultural jobs. Somewhat more than half of these young workers were also attending school, according to estimates based on surveys in prior years. The peak vacation employment was about 750,000 or more.

The amendments to the Fair Labour Standards act, in force from Jan. 25, 1950, extended the protection of its child labour provisions to many thousands of young workers in inter-state industries and in agriculture. Special emphasis was placed by the U.S. Department of Labour on administration of the provisions extending the 16-year minimum age to work in agriculture during school hours. In the cases closed during the year ending June 30, 1950, as a result of investigations made by the wage and hour and public contracts divisions, 18,857 minors under 18 were found in 4,219 establishments, of whom 4,702 or 25% were employed contrary to the child labour provisions.

The most important advances in state child labour legislation made during the year were in Maryland, where the former basic 14-year minimum age for employment was raised to 16, making this state the 23rd to adopt this standard. For minors under 18 years of age work in a considerable number of hazardous occupations was also prohibited and advances were made in hours of labour and night-work standards.

A significant development in education in the U.S. had been an increased trend toward school attendance of young people of high-school age, especially those of 16 and 17 years; in 1950 the estimated number of boys and girls graduating from high school was equal to 58% of the entire number of 17-year-olds in the population.

International Labour Organization Standards. In 1950, Convention 90, prohibiting night work by young persons in industrial undertakings, was ratified by India and Czechoslovakia, and Convention 33, relating to minimum age for non-industrial employment, was ratified by Uruguay. The U.S., as a member country with a federal state government, brought two conventions, one relating to the night work of children in industry and one relating to labour inspection, to the attention of state governments. (*See* also CHILD WELFARE; JUVENILE DELINQUENCY.) (E. S. J.)

YOUTH ORGANIZATIONS. The year 1950 saw the continued development of the youth services in Great Britain although the Ministry of Education was forced to restrict grants by local authorities to youth clubs. The National Association of Boys Clubs reported 210,000 members in 2,800 clubs. The association received more than £11,000 from Kemsley newspapers, raised by them as a memorial to Tommy Handley who died in 1949. In June the

Duke of Gloucester unveiled a plaque at Nash court, Tenbury Wells, to mark the generosity of the people of South Africa — grants from the South Africa Aid to Britain fund were being made to a number of youth organizations in Britain. More than £95,000 was given to the National Association of Girls' Clubs and Mixed Clubs for holiday centres. The association had five " programme-advisers " visiting clubs to interest members in constructive hobbies and good taste

The 1950 exploration of the British Schools Exploring society was to Arctic Norway with a base camp near Kraakaro, between Narvik and Bodo. Some 55 boys from British schools and 6 Norwegian boys took part. The Outward Bound trust continued its work at the sea school at Aberdovey, north Wales, and in June the mountain school at Eskdale, Cumberland, was opened by George Tomlinson, minister of education. The Carnegie United Kingdom trust continued to make a number of grants to youth organizations in 1950, the fifth year of its quinquennium.

King George's Jubilee trust approved for distribution £63,950 among 32 youth organizations in Britain. Investigations sponsored by the trust into " wastage " in the youth clubs and the " unattached " among the nation's youth were started with pilot schemes in a mixed industrial district of Nottingham, a London district and a rural district of Oxfordshire The Youth Hostels association (England and Wales) celebrated the 21st anniversary of its founding. A large rally was held in Hertfordshire in conjunction with the conference of the International Youth Hostel federation at Ashridge, and this was followed by a gathering at the Albert hall, London. In 21 years the Y.H.A. had become one of the largest youth movements in Britain. In 1950 there were over 300 hostels catering for 210,000 members. The international federation decided to re-admit Germany and the Saar to membership. The Association of Jewish Youth, a co-ordinating body of the Jewish youth clubs, celebrated its golden jubilee. The " 18-30 Conference," founded in 1947 to co-ordinate youth organizations dealing with the 18 to 30 age-range, suspended its activities.

International. The Cultural committee of the Brussels treaty arranged three youth courses in 1950. The first was at St. Cloud, France, for experts in the organizing of holidays and leisure for young people. The others were at Baarn, Netherlands, and at Genval, Belgium. There were in 1950 still two international organizations — the Communist-dominated World Federation of Democratic Youth founded in 1945 and the World Assembly of Youth founded three years later. The World Federation of Democratic Youth continued to act in accordance with the policies of the Cominform and its activities in 1950 were mainly centred round the peace movement (*see* COMMUNIST MOVEMENT). During the year the French government refused permission for four members of its secretariat to return to the headquarters in Paris.

The second world student youth congress of the International Union of Students was held in Prague in August. The British delegation reported that the International Union of Students had become " an organ of Cominform propaganda." Following this conference the National Union of Students in Britain held a referendum of its members who, by 18,806 votes to 15,632, favoured leaving the international union.

The second meeting of the council of the World Assembly of Youth was held in Istanbul, Turkey, in August, and adopted the Universal Declaration of Human Rights as the basis of its work. Among the proposals approved by the council were that there should be a number of international work camps, greater exchange of young workers and co-operation with U.N.E.S.C.O. and the International Labour office on pilot projects concerned with illiteracy. The council decided to hold seminars in southeast Asia, the middle east and Africa



Field Marshal Viscount Montgomery of Alamein addressing boys of many nationalities at the Concordia youth camp at New Timber Hill, Poynings, Sussex, in 1950.

to help the youth movements in under-developed areas. The first issue of the assembly's journal *W.A.Y. Forum* appeared in April. The Economic and Social council of the United Nations deprived the W.F.D.Y. of its consultative status on July 20, and later granted similar status to W.A.Y. The second meeting of representatives of international youth organizations convened by U.N.E.S.C.O. was held in Paris in November. During the summer U.N.E.S.C.O. issued a trial issue of a bulletin *News for Youth.*

The People's Democracies. In the U.S.S.R. and in other people's democracies there was one state youth movement organized as an educational branch of the Communist party. The Lenin Young Communist league (Komsomol) of the Soviet Union was founded in 1918, and this movement was the model followed in eastern Europe and in China. The unification of the many movements which had previously existed in these countries was usually carried through at a large conference which was given the greatest possible publicity. One such conference was held in Budapest in June 1950 when 559 delegates, including 64 from the army, met in the presence of the president of Hungary, the prime minister and visitors from 14 countries, when the various Hungarian youth movements were merged in the Union of Working Youth with 1,183,000 members.

By 1950 the connection of other Communist Youth movements with the People's Youth of Yugoslavia was finally severed when the latter was expelled from the World Federation of Democratic Youth in January and later from the International Union of Students.

In the U.S.S.R. the youth newspaper *Komsomolskaya Pravda* celebrated its 25th anniversary and was awarded the Order of the Red Banner of Labour. A large Soviet Youth delegation, led by N. A. Mikhailov, general secretary of the Komsomol, was in China in April and May. Later in the year a delegation from the World Federation of Democratic Youth also visited many parts of China. The Union of Free German Youth held a youth rally in Berlin at Whitsun, May 26-30, attended by more than 550,000 members of the union and 25,000 young persons from western Germany.

Commonwealth. The Colonial Office reported that youth work was making progress, principally in the great urban centres of the far east, in the coastal towns of British West Africa and in the West Indies. By mid-1950 there were youth councils in 11 colonies—in British Guiana, Gold Coast, Hong Kong, Jamaica, Malaya, Malta, Mauritius, Northern Rhodesia, Sierre Leone, Singapore and Trinidad. In Nigeria there were 25 boys clubs in Lagos and district started by the social welfare section of the colony's administration.

United States. In December the mid-century conference on children and youth at the White House, Washington, was opened by President Harry S. Truman. Four conferences had been held since 1909. (*See* also: BOY SCOUTS; GIRL GUIDES; YOUNG MEN'S CHRISTIAN ASSOCIATION; YOUNG WOMEN'S CHRISTIAN ASSOCIATION.)



A cartoon published in "Jež" (Belgrade). Reporter: Are you in good relations with the Soviet Union? Pole: Excellent! We are giving them coal, and they are taking our corn.

YUGOSLAVIA. Federal people's republic of south-eastern Europe, bounded N. by Austria, N. and N.E. by Hungary and Rumania, E. by Bulgaria, S. by Greece and W. by Albania, the Adriatic sea and Italy. Area: (1940) 95,983 sq.mi.; (1947, incl. newly acquired territory of Julian march, Zadar and the islands) 98,826 sq.mi. Pop. (1940 est.): 15,703,000. Federal republics (pop., 1948 census):

	Population	Capital	
Serbia (with the autonomous province of Vojvodina and the autonomous Albanian region of Kosovo-Metohija)	6,523,224	Belgrade	(388,246)
Croatia	3,749,039	Zagreb	(290,417)
Slovenia	1,389,084	Ljubljana	(120,944)
Bosnia and Hercegovina	2,561,961	Sarajevo	(118,158)
Crnagora (Montenegro)	376,573	Titograd	(12,206)
Macedonia	1,152,054	Skoplje	(91,557)
Total	15,751,935		

By mid-1949 the total population was estimated at 16,040,000. Other towns (pop., 1948 census): Subotica (112,551); Novi Sad (77,127); Rijeka, formerly Fiume (72,130). Language: Serbo-Croat, Slovene and Macedonian; Albanian, Hungarian and Italian spoken by minorities. Religion (1931 census): Greek Orthodox 48·7%, Roman Catholic 37·5%, Moslem 11·2%. Chairman of the presidium of the People's National Assembly, Dr. Ivan Ribar; vice-chairmen, Moša Pijade (Serbia), Filip Lakuš (Croatia), Josip Rus (Slovenia), Djuro Pucar (Bosnia and Hercegovina), Marko Vujačić (Crnagora) and Dimitar Vlahov (Macedonia); prime minister, Marshal Josip Broz (Tito) (*q.v.*).

History. During 1950 Yugoslavia's relations with the western powers improved, while the hostility of the Cominform group remained implacable. The effects of the Cominform blockade were felt in Yugoslavia's economic life, but the danger of direct attack from neighbouring countries or from Soviet forces seemed less acute. There was little sign of Cominform-sponsored disaffection inside the country. In September three members of the central committee of the Communist party of Croatia, two of whom were members of its Politburo, were expelled. It was stated that sentimental Panslavism and exaggerated devotion to the Soviet Union had caused them to despair of Yugoslavia's ability to hold out against the Cominform. Holding such views, they had spread defeatist talk and so had played the Cominform's game. It seemed likely that this was in fact their offence. Observers however pointed out that all three men were members of the Serbian minority in Croatia. It was therefore possible that the action of the Croatian party in expelling them might have been influenced by nationalist considerations. In any case it was likely that the action would have been so interpreted by sections of Croatian and Serbian opinion. Also in September took place the only other significant defection to the Cominform of the year. A member of the presidium of the assembly of the Macedonian republic, of Albanian ethnical origin, deserted across the Albanian frontier, where he subsequently stated that he had escaped because the Yugoslav police had been putting pressure on him to organize subversive activities against the Albanian regime.

The continued feud with the Cominform led to no significant political changes within Yugoslavia. On March 26 elections took place to the federal parliament. As in 1945, there was one list of candidates, and majorities averaged more than 90% from a poll of 93%. The only exception of importance



Marshal Tito reviewing units of the Yugoslav army. He described his forces as " one of the best armies in Europe."

was the town of Subotica, on the Hungarian border, where the government list received little more than half the votes cast. This town and its surroundings had a predominantly Hungarian population. Some of those who voted against the government might have done so from enthusiasm for the Cominformist regime of Mátyás Rákosi across the frontier, but it was probable that most of the opposition was due to discontent with the political regime in general and the position of the Hungarian minority in particular.

Little Change in the Regime. The prisons of Yugoslavia still contained people sent there between 1944 and 1948 because they were known as friends of the western powers and especially of Great Britain. These included the Serbian peasant leader Dragoljub Jovanović, the Croatian peasant leaders Toma Jančiković and Franjo Gaži, the Slovene professor Boris Furlan, and other less well-known persons. During the year there appeared to have been some relaxation of police pressure on opinion. Removal of the compulsion to adulate all things Russian and permission to say a kindly word about western countries represented a significant measure of mental liberation. There were even some articles praising the social policy of Britain, written by some journalists who paid a visit to this country in the early autumn. Criticism of abuses of power by the bureaucracy has also been allowed. A satirical writer named Branko Ćopić won great popularity by his attacks on the exponents of policy and even on policy itself, but was sharply warned by Marshal Tito himself not to exceed decent limits. A commission was appointed in the summer, under the leadership of the party's principal Marxist theorist, Moša Pijade, to consider a reform of the judiciary. Among changes anticipated by optimistic observers were a reduction in the powers of the procurator's department (which at present functions on exactly the same lines as the department of the same name in the Soviet Union); an increase in the authority of professional judges at the expense of the ignorant and politically prejudiced " people's judges "; and the abolition of the power of " administrative arrest " at present held by the security police and exempt from control by the courts. Public discussion of these questions was allowed by the authorities. Official support was also granted to attacks on abuse of power by bureaucrats. Some of the privileges of the bureaucrats, including the right to purchase better quality goods in special shops, were abolished. Extravagance on official occasions was denounced from the highest quarter. Marshal Tito himself, in a speech to women in Zagreb on Oct. 28, deplored the tendency of the people's authorities to make any visit by a senior official an excuse to give themselves a feast. In the opinion of the marshal, such occasions justified a glass of *slivovica*, but to kill a pig was too much.

Despite such sumptuary directives and the faint breath of criticism and discussion, little was changed. Further experience would be needed to decide whether the government was in earnest with its political and judicial reforms, or whether all that was proposed was a repetition of the time-honoured Soviet device of making junior officials a scapegoat for popular discontent with measures deliberately decreed from above.

Peasants and " Speculators." The pace of collectivization of agriculture was slackened during the year. At the end of May the number of collective farms was just over 7,000, while at the beginning of the year it had already been more than 6,500. The average size of each collective farm had however greatly increased. At the beginning of the year the average number of families to a collective farm had been 50, in September it was nearly 200. The " Socialist sector in

agriculture" in September covered 25% of the arable land of the country. There was evidence during the year that the authorities were trying to minimize hardship to the peasants. In particular, there was much less action against the *kulaki* (richer peasants) than in neighbouring countries. Nevertheless the authorities were forced at times to complain of the peasants' attitude. In a speech at Užice, in February, Tito stressed the need for a maize surplus to export, in order that raw materials and equipment essential to the industrialization plans might be imported. Yet the peasants were delivering too little to the state. There were more pigs, cattle and sheep in Yugoslavia than in 1939, yet far less meat was reaching the markets. Tito attributed these supply difficulties to the actions of "speculators." A month later, Edvard Kardelj, vice premier, complained of speculators who evaded the government's purchasing agents. The result of these evasions was, Kardelj admitted, that the agents demanded excessive quotas from the "honest peasants" who had already delivered all that was required of them. Such injustices were however inevitable, he argued, until the speculators were checked. The remedy was for the peasants themselves to denounce such people to the authorities. (*See* also PEASANT MOVEMENT.)

Food Shortage. Whether through the action of these wicked speculators, or because the mass of peasants wanted to eat their crops rather than sell them for money with which there was little to buy, or simply because of the drought, the harvest of 1950 was extremely bad. The government was obliged to decree, on Sept. 26, the stoppage of all maize exports, to reduce the bread ration by 10%, and to reduce drastically the compulsory delivery quotas (by 54% in Serbia, 64% in Croatia and 88% in Bosnia and Hercegovina). In the following months the food situation became so serious, and the fall in exports threatened to have such bad effects on the economy as a whole, that foreign aid became essential. The U.S. Export-Import bank granted Yugoslavia a loan of $15 million, and the Western German republic a credit of $30 million, both in August. In mid-November a British credit of £3 million was approved, and on Nov. 21 President Harry S. Truman announced a grant of food supplies for the Yugoslav army to the value of $16 million. But all this was much less than the Yugoslav government had asked for.

Economic Planning. Official statements during the year on the progress of the five-year plan continued to claim high percentage achievements of the proposed targets. Western observers however were convinced that reality fell far short of these claims. The authorities continued to complain of absenteeism by factory workers, which in the first six months of the year was as high as 19% in Serbia. One reason was the frequent failure of the authorities to provide living accommodation in new industrial centres. On June 28 a new law limited the rights of factory managers and gave greater powers to works councils elected by the workers. The councils however were dominated by the Communist party. At the same time there was some tendency to replace managers earlier appointed for political reasons by technical experts. It seemed probable that the aim of the reform was to combine greater efficiency on the technical side with the maintenance of party political control now exercised not through the manager but through the works council. Another change was increasing decentralization of ministries, especially of economic ministries. The federal government transferred wide powers to republican ministries. Here again it would be wrong to take the change at its face value. As long as republican governments remained subordinate to, not co-ordinate with, the federal government, and as long as the hierarchy of the Communist party remained rigidly centralized throughout the country, it was unlikely that decentralization would be very effective. (H. S.-W.)

Education. Schools (1947-48): elementary 12,052, pupils 1,616,002, teachers 23,889; secondary 942, pupils 310,185; technical and art 1,219, pupils 117,369; teachers' training colleges 53, students 16,145; universities 5, students (1948-49) 54,421; institutions of higher education 17, students 2,798.

Agriculture. Main crops ('000 metric tons): wheat (1949; 1950 in brackets) 2,516 (2,300); rye 269 (245); maize (1949; 1949 in brackets) 4,071 (4,150); barley 353; oats 345; potatoes 1,488 (1,939); sugar, raw value 95 (97); hemp fibre 70·8 (84·5); dry beans 148 (145); tobacco (1948) 28. Livestock ('000 head): cattle (Dec. 1949) 5,238; sheep and goats (Dec. 1949) 10,810; horses used in agriculture (Jan. 1949) 1,062; chickens (Dec. 1949) 19,136.

Industry. Coal and lignite ('000 metric tons, 1949 est.) 11,703; electricity (million kwh., 1949) 2,200. Raw materials ('000 metric tons): bauxite (1944) 152; copper ore (1947) 30; lead (1947) 50; zinc ore (1947) 30.

Foreign Trade. (Million dinars, 1949). Import 14,570; export 9,610. Main sources of imports: Italy 8·6%; U.S. 7·2%; Austria 7%. Main destinations of exports: U.K. 23·3%; Austria 8·7%; Italy 8·2%. Main imports: textile manufactures, textile raw materials and machinery. Main exports: cereals, timber, ores.

Transport and Communications. Roads (1940): 20,906 mi. Licensed motor vehicles (Dec. 1949): cars 12,000; commercial 20,000. Railways (1949): 6,926 mi. Shipping (July 1949): merchant vessels over 100 gross tons 101; total tonnage 209,530. Telephones (1949): 66,495. Radio receiving sets (1949): 230,000.

Finance and Banking. (Million dinars) budget: (1949 est.) balanced at 161,746; (1950 est.) balanced at 173,746. Currency circulation (May 1949; May 1950 in brackets): 40,610 (44,450). Bank deposits (May 1949; May 1950 in brackets): 35,130 (40,710). Monetary unit: *dinar* with an official exchange rate of D. 140 to the pound and D. 50 to the U.S. dollar.

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ZANZIBAR. British protectorate on the east African coast comprising the islands of Zanzibar (640 sq.mi.) and Pemba (380 sq.mi.). Pop.: (1948 census): 265,872, incl. 202,834 Africans (known as Swahili), 43,528 Arabs, 15,812 Indians, 308 Europeans and 3,390 others. Religion: Moslem (only 11,000 non-Moslems in 1948). Capital, Zanzibar (pop. 1948, 45,275). Administration: resident; executive council, presided over by the sultan, with the resident as vicepresident, 4 *ex officio* and 3 official members and the heir apparent; Legislative Council, 4 *ex officio*, 4 nominated official and 8 unofficial members. Ruler, Sultan Khalifa bin Harub; resident, Sir Vincent Glenday.

History. The principal concern during 1950 continued to be the "sudden death" disease of the clove plantations. Plans had been made to attack it by a naturally unpopular scheme for large-scale felling of the infected trees, but a detailed survey showed the infestation to be even more serious than had been thought and that the cost of the campaign would be about £1 million. It had perforce to be abandoned and the search for some alternative remedy continued, as also research into possible alternative or supplementary industries. Experiments were, for instance, conducted with cocoa, and the possibilities of pineapple and fish-canning were also being explored. The clove crop for 1950 was, in spite of "sudden death," expected to be excellent. Copra production continued to increase and the government was building a crushing mill. A £250,000 electricity scheme was also approved.

Finance and Trade. Currency: East African shilling (20*s.* = £1 sterling). Budget (est.1950): revenue £965,849; expenditure £963,598, development expenditure £377,368. Foreign trade: imports, £2,750,267; exports, incl. re-exports, £2,687,840. Principal exports: cloves, coconut oil. (K.G.B.)

ZOOLOGICAL GARDENS. The annual meeting of the International Union of Directors of Zoological Gardens, held in London early in June 1950, was attended by

representatives from most European zoos and several from America. Discussions took place on various problems affecting the administration of zoological gardens, including the methods of obtaining wild animals and their care and maintenance (in this connection the first book on the subject in English, *Wild Animals in Captivity*, by H. Hediger, the president of the union, was published during the year, being a translation and revised edition of *Wildtiere in Gefangenschaft*).

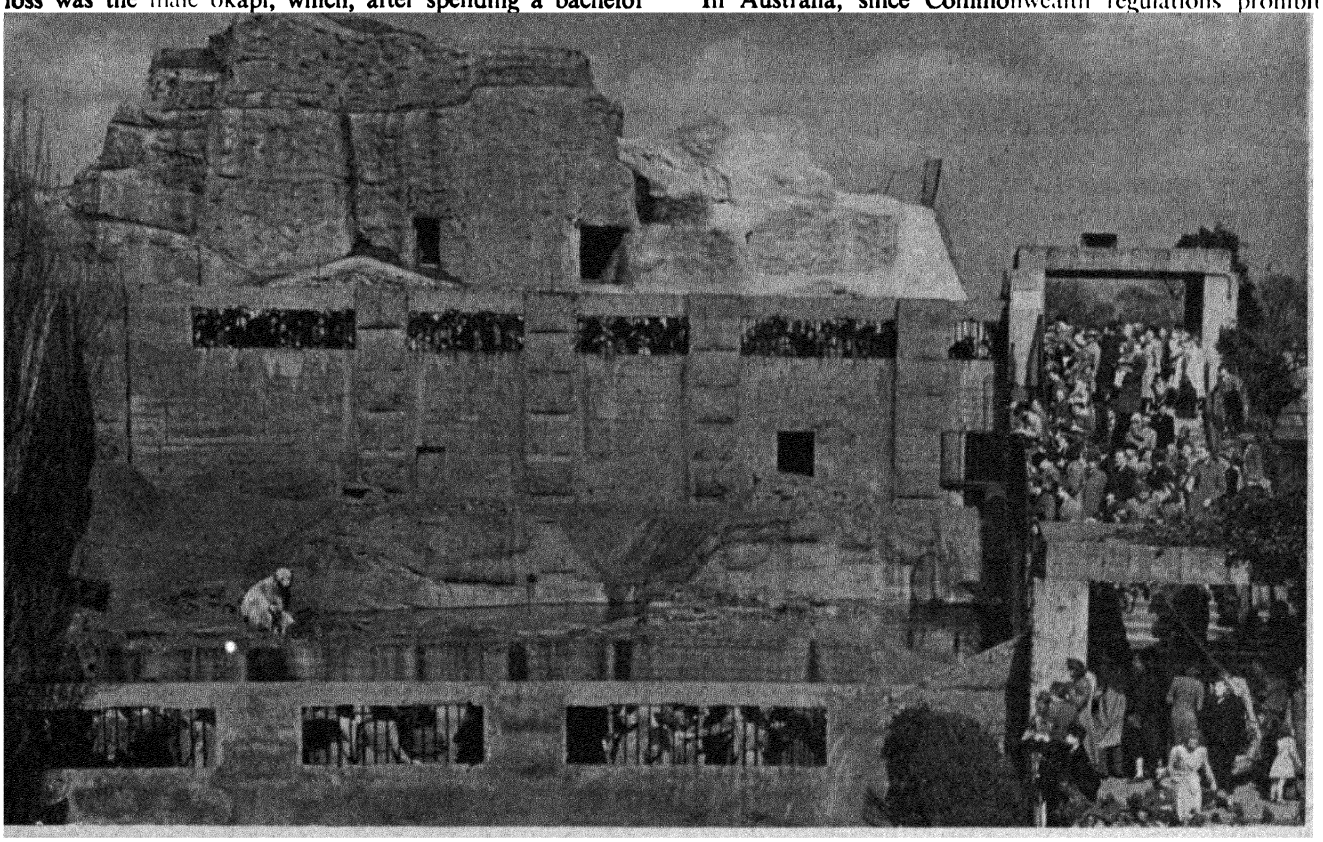
The number of visitors indicated that zoos were more popular than ever: in spite of unfavourable weather there was an attendance of more than 3 million at Regent's park, London, which broke all records; and more than 500,000 people visited Whipsnade. Part of the attendance at Regent's park must be attributed to the extraordinary popularity of a polar bear cub, Brumas, born at the end of 1949 but not on view until early in 1950. The crowds drawn were such as to create a special transport problem and were the more surprising because polar bears had regularly been born and reared at European and American zoos without attracting special notice (though Brumas was the first to be reared in Great Britain). Attempts to transfer the interest to other exhibits were only partially successful, except in the case of the chimpanzees' tea party, which was re-established as a popular favourite. (A photograph of Brumas is shown on page 469.)

Zoos throughout Europe made considerable progress in re-stocking and expanding their collections and most of the losses incurred in World War II had been made good by the end of 1950. The London zoo had the most extensive collections of primates, small mammals and birds ever exhibited in Great Britain or Europe. A pair of emperor penguins, the first to reach Europe, unfortunately failed to survive and the only remaining giant panda died from some obscure nervous condition early in the year. Another serious loss was the male okapi, which, after spending a bachelor existence for 12 years, died apparently from senility within a few months of the arrival of a female. On the other hand, many interesting births occurred, including a lar gibbon, the first to be born in Regent's park, a concolor gibbon, various ungulates and, at Whipsnade, a giraffe and a white-tailed gnu. The birth of another Indian elephant at the Rome zoo was of special interest in view of previous uncertainty concerning the period of gestation in this species, which was now shown to be about 20 months.

The other British non-commercial zoos of Edinburgh, Dublin, Bristol, Chester and Glasgow all reported good progress, though in most cases the exceptionally unfavourable weather seriously affected attendances. The youngest of these, Glasgow, although opened only in 1947, had already had approximately 1,250,000 visitors and had begun to establish a reputation for the breeding of lions and also for the success of its small colony of penguins. The other Scottish zoo at Edinburgh had long been famous for its penguins, and it was suggested that the Scottish climate might be favourable to them; but the good results at Glasgow were attributed also to the use of whiting instead of herring for feeding these and other fish-eating birds.

Whilst certain restrictions on the importation of wild animals were gradually being relaxed, currency difficulties still obstructed the purchase of certain kinds of animals, at least by Britain. Humming-birds for example, an exclusively American group, were represented by one or two specimens only at the London zoo; on the other hand there was a spectacular range of the equally beautiful sun-birds from Africa. The ban on the importation of all parrots because of supposed danger of psittacosis still continued, in spite of clear evidence that 30%—40% of the wild pigeons in London and Dublin were in any case infected with this disease. (E. HIN.)

In Australia, since Commonwealth regulations prohibit



A view of the crowds watching the polar bear cub, Brumas, and her mother, Ivy, at the London zoo. Brumas was born at the zoo on Nov. 27, 1949, and was named after her keepers, Bruce Smith and Samuel Giddings. Brumas, whose father, Mischa, was born in the Arctic in 1935, was shown in public for the first time on Feb. 17, 1950.

the importation of native-born ruminants, swine and monkeys of Africa, Asia and South America, the Australian zoos secured these forms from American collections where they were bred and born. The exhibits in the several smaller zoos of the country had been very much enlarged, the management and support of these having been taken over by zoological societies.

In the North American collections there seemed to be a trend, an aspiration, to show fewer animals more carefully and more profitably. The only exotic collection of great interest was that taken in western South America by Charles Cordier and exhibited at the New York Zoological park. (*See* also WILD LIFE CONSERVATION.) (RO. B.)

ZOOLOGY. A number of international meetings devoted to various aspects of zoology were held in 1950. The most comprehensive was the tenth general assembly of the International Union of Biological Sciences held at Stockholm, July 7-11, and attended by national representatives from most parts of the world and also by delegates from various international organizations, including U.N.E.S.C.O. H. Munro Fox (London) was elected president in succession to M. J. Sirks (Groningen). Among various matters of general interest, one of special importance was the formation of a committee, under the chairmanship of G. de Beer, to try and place the International Commission on Zoological Nomenclature on a more secure financial basis.

The eighth international conference of the International Committee for Bird Preservation (president, Jean Delacour of the U.S.) held at Uppsala, June 8-10, was followed by the tenth International Ornithological congress, June 10-17, attended by nearly 400 delegates from 27 countries, under the presidency of A. Wetmore (Washington).

The fifth International Anatomical congress (president, W. E. Le Gros Clark) was held at Oxford, July 24-28. The International Congress of Microbiology (president, Olympio da Fonseca), held at Rio de Janeiro, Aug. 17-24, commemorated the 50th anniversary of the founding of the Institute Oswaldo Cruz. Finally the International Union for the Protection of Nature (president, C. J. Bernard) met in Brussels, Oct. 18-23.

Publication and Research. The number of journals devoted to zoology continued to increase, one of the most important new publications being the bulletin of the British Museum (Natural History), with series in zoology and entomology. Among general publications was vol. XV of the French *Traité de Zoologie* (Paris), of 1,164 pages, profusely illustrated, on nearly every aspect of ornithology by a group of 12 collaborators, edited by Pierre-Paul Grassé.

A fifth volume of *Nomenclator Zoologicus* by S. A. Neave, covering the generic names added from 1936 to 1945, was published by the Zoological Society of London. The whole work now contained a list of the names of genera and subgenera in zoology from the tenth edition of Linnaeus (1758) to the end of 1945, and comprised nearly 250,000 entries. The official record of the proceedings of the section on nomenclature of the 13th International Congress of Zoology were published during the year as part of the *Bulletin of Zoological Nomenclature* (London).

Among books on special subjects, J. Z. Young's *The Life of Vertebrates* (Oxford) with 800 pages, profusely illustrated, was an important addition to knowledge, especially of the higher vertebrates. *The Meaning of Evolution* by G. Gaylord Simpson (London) dealt with general aspects of the problem, whilst W. E. Le Gros Clark's *History of the Primates* and R. Broom's *Finding the Missing Link* (both London) were concerned mainly with the significance of the primate fossils discovered by Broom and his colleagues in South Africa. Fernand Windel's *The Lascaux Cave Paintings* (London) was also of interest in tracing the evolution of man. A completely new edition of M. Caullery's standard work *Le Parasitisme et la symbiose* (Paris) brought together a number of little-known examples of parasitism not only in animals but also in plants. There were also a number of monographs on special groups among which may be mentioned J. L. B. Smith, *The Sea Fishes of Southern Africa* (Capetown); Ch'eng-chao Liu, *Amphibians of Western China* (Chicago); Tom Iredale, *Birds of Paradise and Bower Birds* (Melbourne); and part 1 of *Grønlands Fugle* (Copenhagen), by Finn Salomonsen, with coloured plates by Gitz-Johansen, containing a description of the birds of Greenland in Danish and English. There were also two volumes published by the Ray society in London, F. Balfour-Browne's *British Water Beetles*, part II and N. J. Berrill's *The Tunicata*. A wide range of books on general natural history appeared, including Maurice Burton's *The Story of Animal Life* (London), with more than 1,000 illustrations and special articles by zoologists of various countries.

The results of the symposia of the Society for Experimental Biology and the Institute for the Study of Animal Behaviour held in 1949 were published under the title *Physiological Mechanisms in Animal Behaviour* (Cambridge).

The number of publications listed in vol. 84 of the *Zoological Record* (dealing with the literature for 1947) published early in 1950, still remained in the neighbourhood of 12,000, and there was no sign of any falling-off in their quantity. Among these attention should be called to an interesting essay, " Problem mezoderma in celoma v luči turbelarijske teorije knidarijev," by J. Hadži in *Razprave Razreda za Prirodoslovne in Medicinske Vede Slovenske Akademije Znanosti in Umetnosti v Ljubljani* (Ljubljana, 1949) written in Slovene but with a summary in English. The author put forward an entirely new hypothesis to explain the origin and evolution of multicellular animals from the single-celled Protozoa, starting with the following facts: that Coelenterates are not really two-layered but are often bilaterally symmetrical; that in this phylum gastrulation occurs in the most diverse ways; that nematocysts are found in Protozoa, Turbellaria and Nemertines; that tentacles with an endodermal core are found in Turbellaria; and that the origin of Metazoa is better conceived as an internal cellularization of a multinucleate Protozoan than an aggregation of separate individuals, because the maintenance of the integration of the organism is thereby preserved. For these and various other reasons Hadži proposed his new explanation of the origin of the Metazoa: by internal cellularization multinucleate Protozoa are supposed to have given rise to the Turbellaria; then as a result of adopting a sessile habit Rhabdocoel Turbellaria gave rise to Coelenterates of which the Anthozoa are the most primitive; in the subsequent evolution of the Scyphozoa and Hydrozoa all traces of bilateral symmetry were lost except in the planula larva (a medusoid stage was introduced as an aid to dispersal, and asexual reproduction and colony-formation as an adaptation to the sessile life). This hypothesis, at first sight startling and seemingly extravagant, opened the possibility of explaining much that was obscure in the relationships of the simpler Metazoa. (*See* also ENDOCRINOLOGY; ENTOMOLOGY; GENETICS; MARINE BIOLOGY; PALAEONTOLOGY; PHYSIOLOGY; ZOOLOGICAL GARDENS.) (E. HIN.)

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